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NORTHERN CALIFORNIA
by
Genl. N.P. Chipman

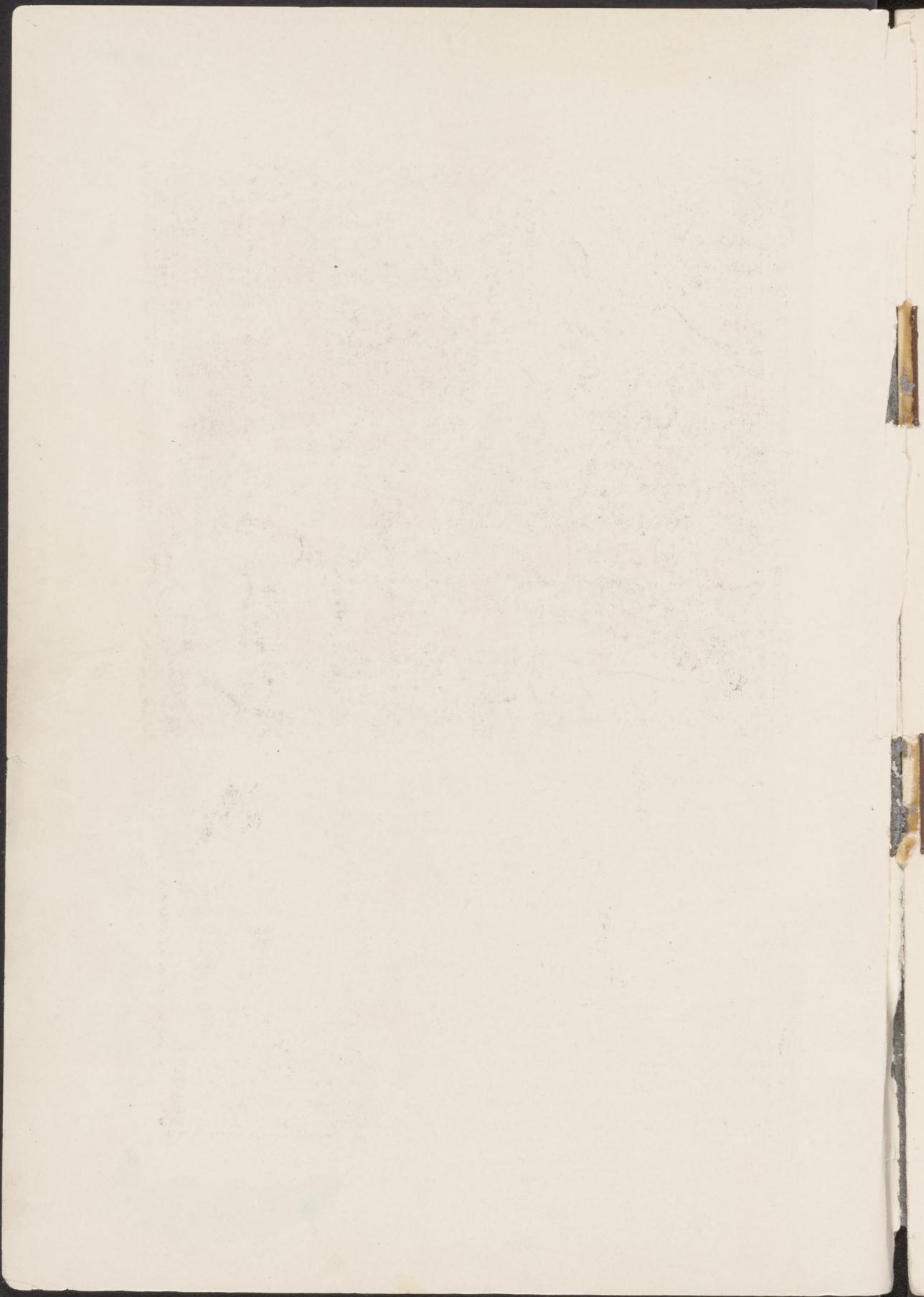
6000 square miles
that will grow ~~~
anything ~~~ man may plant~



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Northern California Oranges.

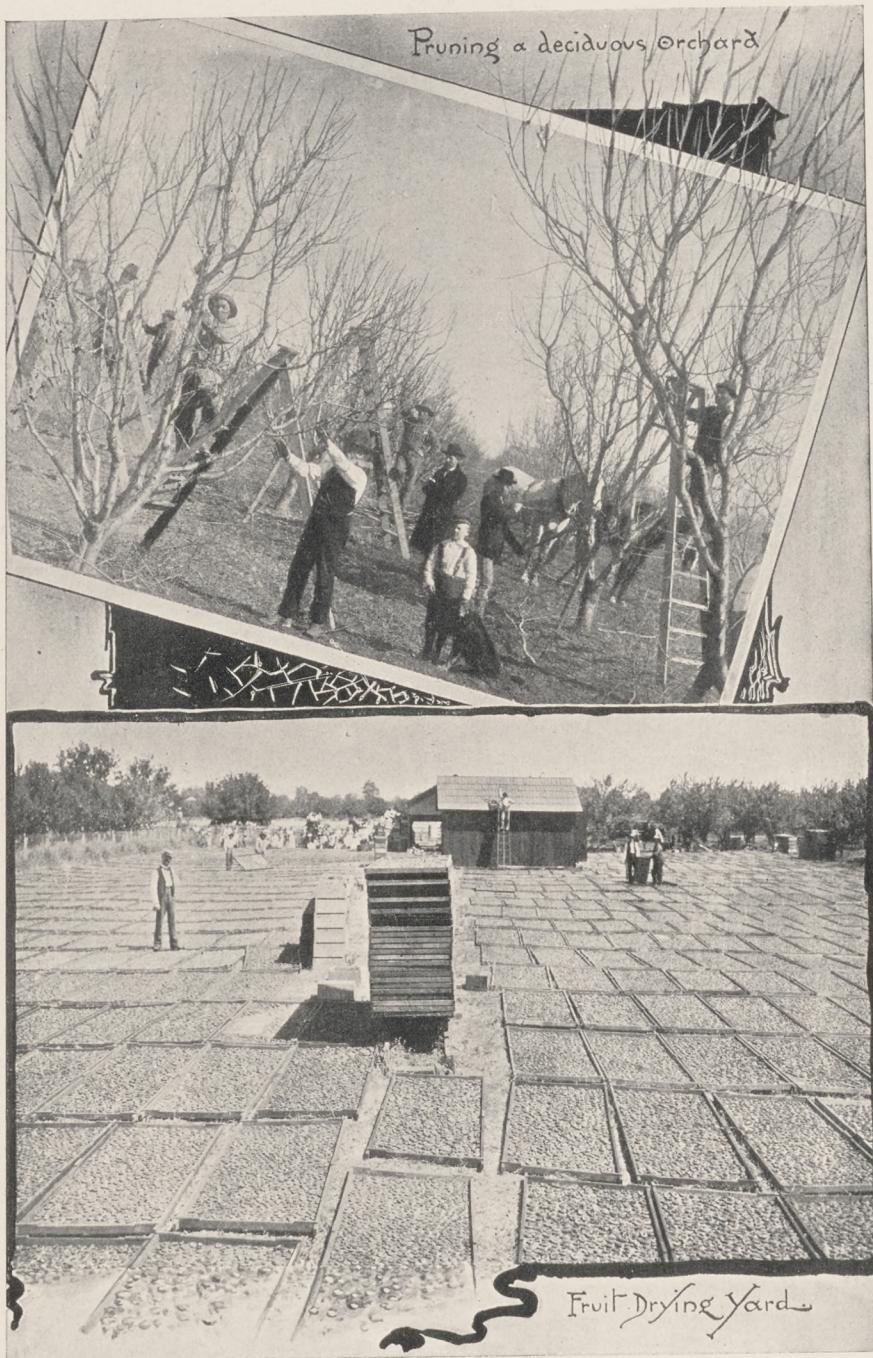




RECOGNIZING the renewed interest now shown for information concerning California, particularly Northern California, and realizing the necessity for united effort in order that this region may become better known, certain enterprising citizens recently formed The Sacramento Valley Development Association. The organization embraces the twelve counties of Nevada, Placer, Sacramento, Yolo, Solano (the south tier of counties at the foot of the valley), Yuba, Sutter, Butte, Colusa, Glenn, Tehama, (intermediate), and Shasta on the north boundary, or at the head of the valley. It is at the request of the Association that these pages have been written.

Obviously, I can go into no very great detail as to any individual county, for it would occupy all the space given me to describe the entire re-

gion. However, with some not very important variations, a description of the whole is a description of each part. Different industries exist in different counties; a greater development will be found in some than in others; some are devoted to agriculture, fruit growing, mining, and lumbering enterprises; others to general agriculture and stock raising, with some fruit growing; still others to fruit growing and general agriculture. The agricultural possibilities, while differing in degree, are much the same in all. The photographic illustrations will aid the reader to some extent to understand the dominant industry in each of the counties, and these pictures, it is to be hoped, will give some idea of the vast variety of scenic effects throughout the valley. I count it, indeed, among the greater advantages of any country that one may



January and September in Northern California.

live in the perpetual presence of grand mountains and diversified and charming landscape effects. It develops the spiritual and better elements of character and gives to labor an ennobling motive and relieves it of its depressing monotony. One may look the world over in vain for a region of like extent (outside of California) combining greater natural attractions to the permanent resident, in the direction hinted at, than are everywhere abundant in the Sacramento Valley.

It is assumed that the romantic history of California, which has added so much to its renown is too well known to need

Some Things Taken for Granted

repetition; it is also assumed that the reader is familiar with most of the unique characteristics of the earlier and later development which has taken place in the State, and is conversant with the general facts which justify the claim that California is, in many respects, unmatched by any State of the American Union. No other commonwealth is so widely known abroad, for none has, by the wonderful variety and quality of its products, so attracted the public attention, and no State, judging by the unequaled progress California has made in the past fifty years, has in its favor so much of hope, so much of brilliant prophecy.

It is now universally conceded that the territorial changes which have taken place as the result of the Spanish-American war portend a new era for the Pacific Coast, and that rapid and permanent growth must

The Dawning of a New Era.

soon begin here. No one at all familiar with existing conditions can doubt that the Pacific Coast State to which intelligent men are now looking, is California, and that the commercial emporium which is to dominate the vast trade and commerce, that is to flow to and from this Coast, is the city of San Francisco. There was never in the history of the State a more opportune time than the present

for the homeseeker to come among us or for the business man to enter upon a new field of enterprise in this promising land.

The Period of Romance and Poetry has Passed Away.

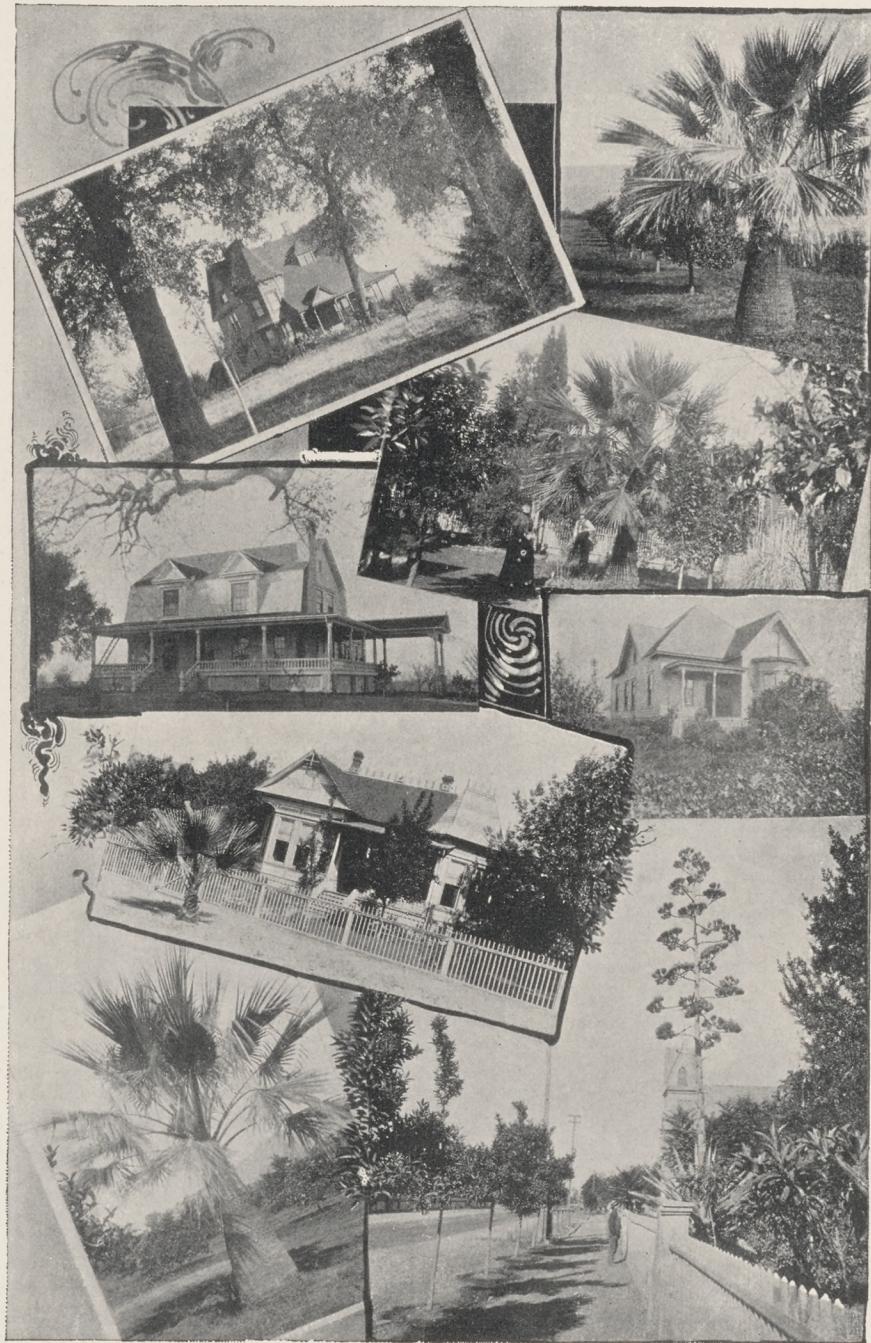
The artist, the poet, the writer of glowing prose, have all done their part, and done it well, in painting the glories of our mountains and valleys, our matchless landscapes, the romance of "the days of old, the days of gold." All this has thrown a glamor and charm around everything Californian, and has directed attention to our State and given us a warm place in the hearts of thousands who are looking this way and hoping for a time when they may themselves become Californians. But the days of romance and romantic conceptions of the Golden West have passed away. Inquirers now need facts which will convince their judgment and not appeals to their imagination; they desire specific information, not generalization nor highly colored description.

The genius and enterprise and persistent advertising of Southern California have given widespread knowledge of that part of the

A False Impression Corrected.

State, but the North is not yet known nor understood. Somehow, the impression has gone abroad that the distinctive features which give uniqueness to our climate and products are peculiar to Southern California, and are absent in Northern California; "Southern" has meant the California which has so attracted attention, while "Northern" has designated a country not unlike other portions of the United States on similar parallels of latitude. No conception of the actual facts could be wider from the truth. The same general climatic conditions exist in the Sacramento Valley as are found in the valleys of Central and Southern California; parallel lines of latitude have but little significance in the interpretation of conditions of temperature.

The copious illustrations found on these pages give the highest proof of



Artistic Homes in Northern California.

what I have said. The orange, lemon, olive and the palm do not grow in cold countries. Look at the photographs (a splendid specimen of the palm in Solano County growing in the open, and also a palm tree 40 feet high in Shasta County planted in 1852.) To the intelligent mind the range or possible diversity of a country's products is a true index of its climate, and proclaims unerringly the economic advantages of that country. No matter who denies, nor with what persistency is the denial made, the truth of nature rises and confronts the error and should forever set at rest all doubting minds. It is the testimony of God Himself; and it would seem sacrilegious to attempt corroboration by official tables of temperatures and statistics of reported products elsewhere given in this article. I shall spend no further time in combatting the false impression that the term "Northern," when applied to the valleys of Northern California, means "cold." It is a term used only geographically, and has no climatic significance whatever. It may be said here once and finally that "altitude" in California is the only convertible term for "cold." Perpetual snow lies on Mount Shasta and Mount Lassen, and reflects its light on the valleys below, where is almost perpetual summer. In the higher mountain elevations are deep snows and very low temperatures, while at the same time a few hours travel bring one into orange groves in the lower altitudes; and this is true from Shasta to San Diego, practically the whole length of the State. Let us, then, dismiss the false implications which have arisen from using the term "Northern" as applied to the Sacramento Valley.

Entering California in Nevada County, by way of the Central Pacific Railroad, the visitor comes quickly down from

Nevada County,
A Gate-Way to
California.

the great height of
the Sierra Nevada
Mountains to the
foot-hills of Placer
County, through
the orchards and
vineyards covering the country around
Auburn, Newcastle, Penryn, Loomis,
Rocklin, Roseville, to the city of Sacra-
mento, where he finds himself in the

center of the Great Interior Valley of the State, at the State Capital, and where tide-water once ebbed and flowed.

A few hours from snow-covered, heavily forested mountains into regions of luxuriant, semi-tropical verdure, is a transformation bewildering but altogether delightful. A glance at the accompanying map will show where the visitor now stands relatively to San Francisco, and the counties comprising the Sacramento Valley, a description of whose resources and industries is the purpose of this article. Nevada County is the Eastern gateway to this land of sunshine, fruit and flowers and agricultural prodigality.

A line drawn east and west through the southern boundary of Solano County at Vallejo, would pass near Richmond, Va.; drawn along the northern boundary of Shasta County it would strike the Atlantic coast near New York City. The floor of the valley proper narrows and terminates at Red Bluff, Tehama County. But many stretches of rich river bottom, valley lands, occur in Shasta County, below Redding, and for many miles east of Redding and west of Anderson and Cottonwood, are fertile plains and rolling foot-hills and creek valleys of fine agricultural land, a characteristic of most of the counties reaching into the mountains; indeed, it may be properly said that the valley terminates at Redding. The valley widens as it extends south, and follows the southern boundary of part of Placer and Sacramento, Yolo, and Solano Counties, and brings the valley to San Pablo Bay, (an arm of the great Bay of San Francisco) at Vallejo. The general direction of the valley is north and south. A line drawn north and south through Suisun, on Suisun Bay, would pass near Willows, Red Bluff, and Redding. On the east, the valley is bounded by the Sierra Nevada Mountains, and on the west by the Coast Range. The Sacramento River rises in the vicinity of Mt. Shasta, and courses south, bisecting the valley and emptying into Suisun Bay. It is navigable and is navigated by steam-boats to Red Bluff. By some improvement of the river it may be navigated to the town of Redding, Shasta County. Rising in the Sierras are numerous tributaries

of the Sacramento River, which find their inexhaustible supply in the springs, subterranean reservoirs, and snow banks of the mountains. The land situated on the east side of the Sacramento in all the counties is blessed with one or more of these ever-living streams, the utility and value of which will be referred to later on. The portion of the valley on the west side of the river is not so highly favored, although not wanting in the means to procure every needed supply. Unlike the creeks and rivers rising on the

southern slope of the valley will be seen from the elevations of the river—at Sacramento, thirty feet above sea level; at Colusa, 60 feet; at Red Bluff, 220 feet. A canal is projected and partly built, which takes water directly from the river on the north line of Glenn County, and brings it as far west as Willows, and thence to practically all the valley land south and east of the canal.

A margin of no great extent along the river banks is wooded, and the lands on



The Clothes we wear in November, Yuba County.

west slope of the Sierras, which flow on perpetually, the characteristic of the streams rising on the east side of the Coast Range is that they carry the flood waters to the river and continue to flow until about June or July, and then begin to recede, ceasing at varying distances from the river in the foot-hills, but continue in quantity to points whence their waters are taken by ditches to the land below. Some impression of the general

the east side have growing upon them scattered oaks, giving a park-like aspect to the landscape. This feature continues in Yolo and Solano Counties, but in Colusa and Glenn the plain lands are destitute of timber; the rolling hill lands and mountains are wooded. The great body of agricultural lands of the valley do not overflow; some of the river bottoms are subject to flood waters but exposed lands are mostly protected by levees.

The population, extent and character of the industries will be given in connection with a description of each

**Industries, Extent,
and Character.**

Population.

county. Accurately speaking, we have but little waste land. The untilable foot-hills and lower mountain elevations

furnish rich winter pasture for thousands of sheep and cattle and the mountains are not only the scene of large lumber enterprises, but afford extensive ranges for summer pasture of these same flocks and herds. In Tehama County alone there are two hundred thousand sheep that are moved in the spring to the mountain ranges and return in the autumn to the valleys and foot-hills for winter pasture. Twelve thousand head of cattle are similarly handled. And so in a greater or less degree in most of the counties are the lands utilized.

It has been intimated that there is no practical difference between the climate of the valleys of Northern California

Climate: and Southern California. Perhaps a word further should

be said. I quote from my annual report to the California State Board of Trade for 1899, a general statement which fairly gives the facts and perhaps as well as I could again give them: "Much has been written of the unique character of the climate of California, and while it is widely known in a general way, its highest and best interpretation is exhibited in the marvelous range of products of the soil. There is no single country nor principality on the globe where there can be found, growing in perfection, all the varied products of which this report treats. Why this is true has never been satisfactorily explained, but the fact cannot be disputed. It is not due to the soil alone, for other countries have rich soil; it is not due to temperature alone, for the seasons are propitious in the south of Italy and in Spain; yet the results we have here are not attainable there; it is not in the recurrence of a wet and dry season—a per-

iod of rain and a rainless period—for this peculiarity is found in the Mediterranean basin; nor is it in any peculiarity of the atmosphere of which we have any knowledge. And yet there is some subtle influence in the combination of all these—an alchemy of nature we do not understand—which has made the climate of California unique—phenomenal** Latitude cuts but little figure here, although it marks zones of heat and cold on the Atlantic Coast. While I am writing (March 4th-6th, 1899), there is a blizzard raging in the East and West. Railroad trains are tied up, and snow is four feet deep in the city of New York. On the same parallels of latitude here the orchards are bursting into full bloom, vegetables are taken from open gardens; the first crop of alfalfa is nearly ready for the mower; young lambs are playing on the hillsides; farm operations are most active, and all nature is clad in verdure."

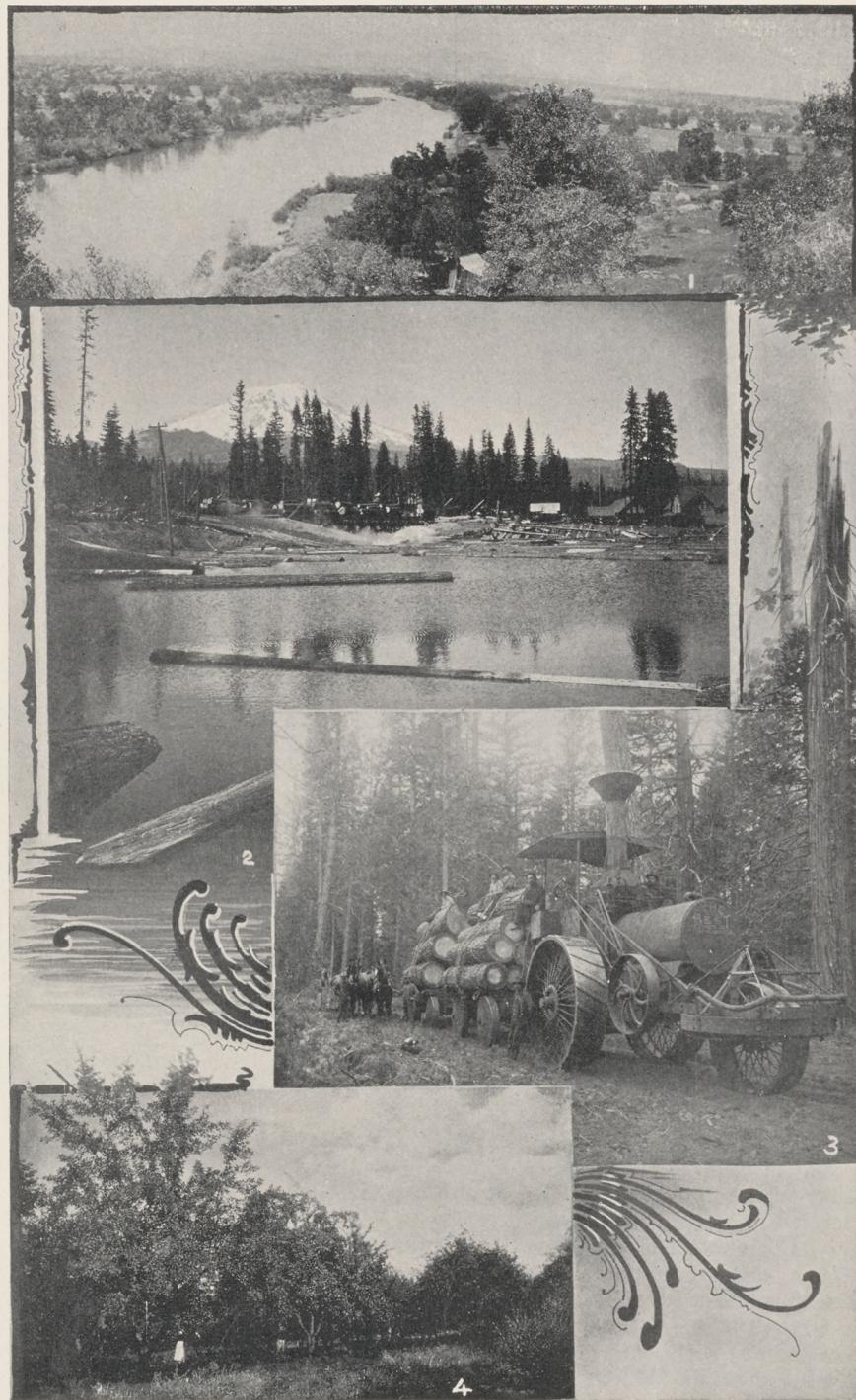
Attention is then called to the fact elsewhere shown that oranges are being shipped from Butte County, 150 miles north of San Francisco, and over 500 miles north of San Diego, and that elevation has more to do with temperature than has latitude. The report continues:

"I will not stop to give the causes, so far as they are determined, for it is enough to know the fact and that the causes are permanent. We have no recorded history and no traditions (and they run back to the days of Queen Elizabeth and to Ferdinand and Isabella) that tell a different story."

The climate of the immediate coast is most invigorating and stimulating, cool, bracing, and delightful; the laborer

Healthful, knows no fatigue except from physical
Invigorating. exhaustion, produced by over-taxed

muscles. The man who works with his brain yields only to failure of mental power. In the interior valleys, in mid-summer, the temperature is higher, and there is discomfort in working in the harvest fields, at the desk, and behind the counter. But the air is dry, and no such suffering is experienced as in the more humid climates, where the temperature



SHASTA COUNTY—1. City of Redding, pop. 3500. 2. Lumbering scene at Mt. Cloud.
2. Traction engine hauling logs. 4. Pear orchard near Shingletown.

i.: lower. We have no such thing as sun-stroke. It is the universal experience that persons coming to any part of the State increase in weight and strength, are less subject to nervous troubles, sleep and eat well, and improve in health if ailing from any cause. In fact, California is an universal sanitarium."

"One cannot find a region of the State devoid of scenic beauty, and in most parts one is surrounded by an inspiring

Source of Happiness. and elevating combination of valley and mountain landscape. He can

radically change his immediate surroundings in a few hours, if he lives in the great valley, by going into the mountains or journeying to the coast. Thousands of families do this in the summer, and have most delightful camping out experiences.

"But after all, the toiler cannot live on scenery nor on climate alone. It is the

Economic Value. advantages which climate brings to him in the struggle for existence that most concerns

him. And here is where resides the glory of California: namely, the economic value of its climate. Our climate is usually put forward as an attraction; it is most of all a *resource* of incalculable value; and it is a resource because by its influence we are enabled to so marvelously diversify and increase the number of our products. It is a resource, because man's labor can be made profitable every day in the year, and because there is no month when vegetation, in some form, is not growing. There is no season when all nature is at rest or locked in the icy embrace of a zero temperature, and the harvests of summer eaten into by the long, weary, consuming months of winter. In the field, orchard, garden, factory; on the stock farm and in the dairy, *every day* is a day of *productive labor*. We commence shipping fresh deciduous fruits to the markets of the East in May, and there is no cessation until December; and in November we begin to ship citrus fruits and they overlap the ship-

ments of deciduous fruits beginning in May."

This general picture finds its counterpart in the region I am now bringing to the public attention. I wish to remind the home-seeker of a fact, not commonly understood, that there are about 20 degrees difference between the "sensible temperature, and the actual reading of the thermometer. For example, the thermometer in the valley may read 110 degrees, but owing to the dryness of the atmosphere, the effect upon the body produces less discomfort than would be felt in a humid atmosphere where the reading is 90 degrees.

While I am writing (February 18th, 1901), all Europe is experiencing a blizzard of great severity. All parts of England, Germany, Italy, Austria, and Russia are having severe snow storms and very low temperature. Throughout Spain the weather is reported as intensely cold, the thermometer registering eight degrees below zero in Madrid, and a heavy snow storm is raging in Rome. In Algiers, several natives have frozen to death. In my garden we are picking violets, roses, and other flowers; we gather oranges from day to day as we need them; our live stock are living on our green pastures; orchard pruning is over; almond trees are blooming and apricot buds are nearly ready to burst. Californians are wont to attest our climate by comparison with that of Italy and Spain. Is it not about time to set up in the climate business for ourselves and rely on our own record?

The practical situation is that one can labor here in the summer's sun without suffering, where he would be driven to the shade in other climates. It should be added that our warm, cloudless and rainless summer months are just what we want to mature our crops and prepare our fruits for market. The prevailing winds are from north and south, the latter always cool and delightful, as it comes from the ocean, tempered in its journey inland. The north wind is warmer, and is a dry, sometimes disagreeable, wind, but it serves a most valuable office and adds to the general healthfulness of the valley.

DEL NORTE

KISSEL
Ft. Jones
Granada
Gazelle
Etna Mills
Blk Bull
Igernia
MT. EDD
Upton
Sisson
Shasta
Retreat
Bunsmuir
Baileys
Sweet Briar Camp
Cinnabar
Carryville
Trinity Crk.
Minerville
WEAVERVILLE
Big Bar
Trinity
Minerville
WEAVERVILLE
Big Bar
Trinity
TRINITY
SOUTH FORM
HOOPA VALLEY
IND. RES.

MODOCK

Ten Eyck

Klamath

Blaine

Trinidad

H.D.

Korbel

EUREKA

Freshwater

Humboldt

Fields Idg.

Beaird

Ice

Swauger

Fortuna

Hydesville

Scotia

EEL

F.J. Baker

Bridgewater

Upper Mattole

Phillipsville

Castro

Garderville

Bear Log

Usal

Rockett

Rockport

Westport

KIYOU

Montague
Edgewood
Igernia
MT. SHASTA
Upton
Sisson
Shasta
Retreat
Bunsmuir
Baileys
Sweet Briar Camp
Cinnabar
Carryville
Trinity Crk.
Minerville
WEAVERVILLE
Big Bar
Trinity
TRINITY
SOUTH FORM
HOOPA VALLEY
IND. RES.

Mt. Shasta

Ash Crk. Mill

Mc R. Mc Cloud

Shasta Soda Sugs.

Glacier

Castie Crag

Castellia

Cloud & RIVER

Shasta

Stations

Bayes

De Delta

Smithson

Stillwater

REDDING

Anderson

cottonwood

Ball's Ferry

BATTLE CR.

Red Bluff

Proberta

Vina

Tehama

Sesma

MODOCK

ALTURAS

SOUTH FK

EAGLE Pt.

Adin

Ashton

Pittville

Fall River Mills

Carbon

Cassel

Shumway

Addington

SUSANVILLE

BLACK BUTTE

Mt. LASSEN

Shungleton

Honey

Tuscar Spg.

Pratville

Longville

Duch Hill

Greenville

Crescent Mills

Taylorsville

Genesee

QUINCY

LASSSEN

BOY

Lake Grp.

N.C. & O. R.

Summit

Clairville

Monawhi

Eureka Mills

Summit

Enterprise

Nelson P.

Sierra

FORK

FRUIT

UTTER

FRUIT

PLUMAS

Amadeo

HONEY L.

BLACK BUTTE

Mt. LASSEN

SHUNGLET

Honey

Tuscar Spg.

Pratville

Longville

Duch Hill

Greenville

Crescent Mills

Taylorsville

Genesee

QUINCY

Spanish Ranch

Bagley

Longville

Duch Hill

Greenville

Crescent Mills

Taylorsville

Genesee

QUINCY

Spanish Ranch

SIEVER

Boy

Lake Grp.

CL

EUREKA

Summit

TRINITY

UMBOLDT

Umboldt

Fields Idg.

Beaird

Ice

Swauger

Fortuna

Hydesville

E.R.B.E.

Scotia

EEL

F.J. Baker

Bridgewater

Upper Mattole

Garbersville

Bear Log

Usal

Rockett

Rockport

Westport

Lyman

Fruto

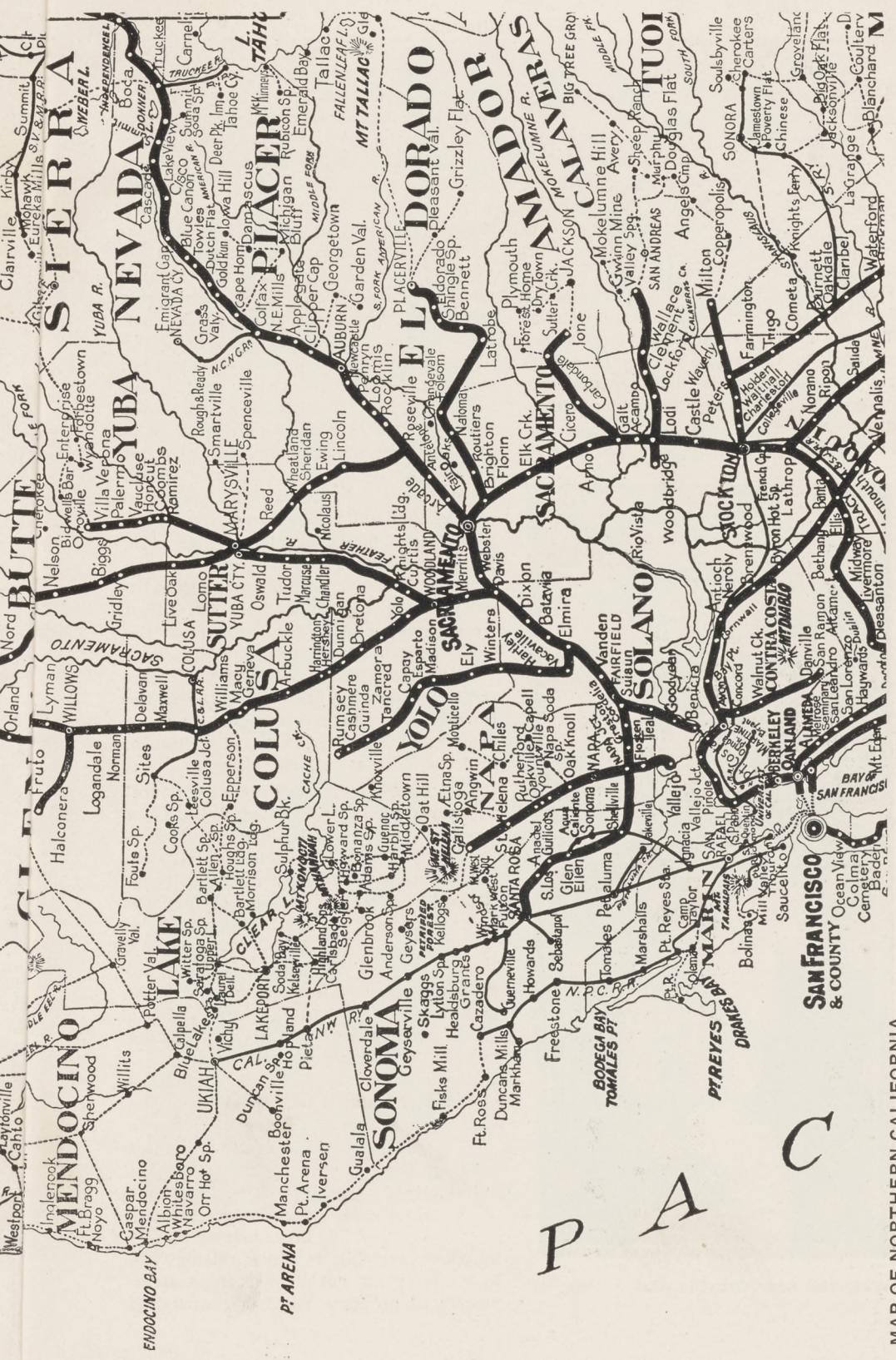
Coverlo

Cummings

Loytonville

Carlo

YERBA BUENA

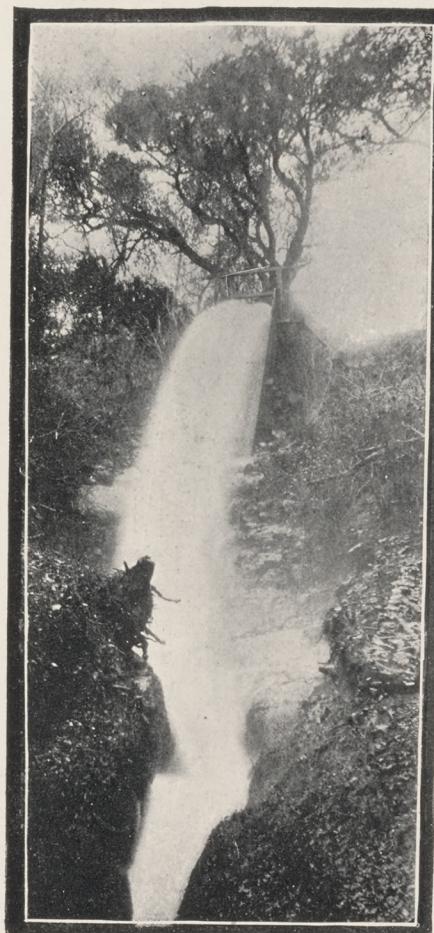


MAP OF NORTHERN CALIFORNIA.

Industries relating to agriculture are the growing of wheat, barley, oats, hay, some rye, and some, but not much corn. For many years Colusa was the banner wheat growing county in the State. Forage plants are quite extensively grown. Hemp has been and is being successfully and profitably grown in Butte County. The soil in many counties has been found adapted to the sugar beet, and a considerable acreage is planted, the product going to the sugar factories; this industry must soon have much importance in the valley. I may mention in this

Leading Industries.

Leading Industries.



Waterfall near Oroville, Cal.

connection the advantages of sugar beet growing in this State. Briefly summarized, they are: Earlier maturity of the beet; earlier opening of the sugar-making campaign; longer season for harvesting; longer run of the factory; greater yield per acre than in other States; greater per cent of saccharine; immunity from frost and from rain at critical periods. These are some of the climatic advantages which experience and scientific experiments have established. Some extensive hop fields are in the Sacramento Valley. Live stock is a large industry, especially hogs, sheep and horned cattle. Many horses and mules are bred on the larger ranches. The dairying interests are quite large, but not nearly so fully developed as they should be or could be made profitable. The poultry industry is almost wholly neglected. Large bands of turkeys are seen, but they are produced separate from the farm, and have a sort of nomadic existence, being herded and driven about from place to place for feed, much the same as a band of sheep. Many farmers (be it to their discredit said) buy their chickens and eggs and butter at the town stores, and not infrequently these come from Kansas, Iowa, and Nebraska, or from our sister State, Oregon.

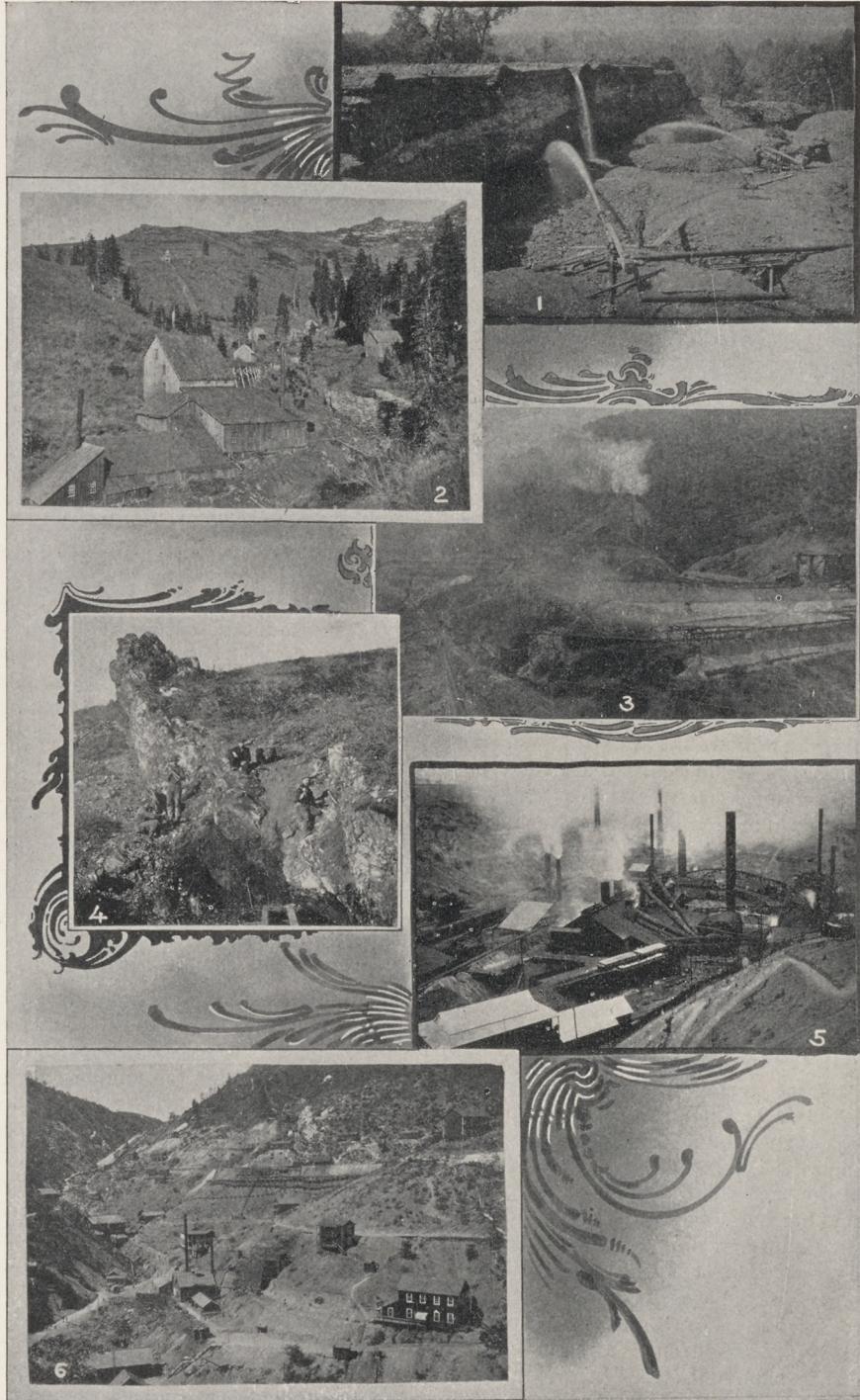
The possible diversity of agricultural products in this great valley is its chief distinguishing characteristic.

Agricultural Possibilities of the Valley. The richness of the soil and the prevailing climatic influences make it possible, with irrigation, to grow almost anything that man or beast may require, and without irrigation, a much greater agricultural development is possible than has yet been attained.

The Sacramento Valley is the most abundantly watered portion of the State.

The large rainfall in the valley, coupled with the fact that great areas have been in single holdings, devoted chiefly to wheat growing or stock raising, has in former years not only retarded diversity of products but has contributed

Water for Irrigation.



Mining in Shasta County.

1. Hydraulic Mine near Igo. 2. Cleveland Consolidated Mine. 3. Roasters at Keswick. 4. Cleveland Cons. Mine Ledge. 5. Smelters at Keswick. 6. Iron Mountain Mine near Redding.



Banana trees at Red Bluff—225 miles north of San Francisco.

to the erroneous belief that irrigation was neither desirable nor necessary, and irrigation has not been much resorted to. Wheat growing, having become less profitable, attention is being directed to more intensive and more diversified culture, and plans for more general irrigation are being considered, since it has been found that even on our best lands water is a distinctive source of greater production and makes agriculture more profitable, by adding many new products to the farm. The Central Irrigation District Canal will bring water directly, without any head dam, from the Sacramento River onto all the lands south and east of Willows—an immense area, rich and productive. On the west side of the river north of this canal there is abundant water by taking it from points high up on the creeks and conducting it by ditches to the land below. Ditches are now constructed which bring water from Thomes Creek to lands at Corning, Tehama County; at Orland, Glenn County, from Stony Creek; and at Woodland, Yolo County, from Cache Creek. On the east side, commencing in Shasta County, large creeks flow into the river from the Sierras, at convenient intervals, through all the counties on that side, until the American River in Sacramento County is reached. The map shows the frequency of these streams. There is ample water for the most complete irrigation of all the lands. Water underlies the valley everywhere,

at varying depths of from fifteen to fifty feet.

A striking and most valuable feature of these mountain creeks and rivers is the latent forces

Power Possibilities.

within them that may be cheaply, and are being largely set free by electrical plants. These streams above the valley have a fall of from 50 to 100 feet per mile; often much greater. This power may be utilized and yet restore the water to the beds of the streams before reaching the valley, where it may be used for irrigation. Electric power plants are now in operation in Shasta, Tehama, Butte, Yuba, Placer, Nevada, and Sacramento Counties, of which mention will again be made. This power is being used for mining and milling purposes; for lighting towns and cities; operating machinery; pumping water; operating farm implements, and various other uses. I know of no region so highly favored in the respects last mentioned.

In the Sierras, from Siskiyou County to the American River, are the finest and

Mining and Lumber Industries. most extensive forests of sugar and yellow pine, spruce and fir timber existing in the State, and some of the largest lumber and mining enterprises are carried on in these moun-



Peach Orchard Sacramento Valley.

tains. The forests of California are her crowning glory, not as sources of lumber for market, but as the great conservers of moisture and as the mother of our creeks and rivers. Intelligent use of this great blessing will give us assurance of unchanging climatic conditions and ample supply of timber for all possible purposes. Shasta County is the largest mineral producer in the State. The annual output in 1899 was \$4,661,980, since greatly increased, and Nevada comes next with \$2,231,898.

The two terminal points of shipments of fruit by rail from this valley to other

States are Marysville and Sacramento.

Magnitude of the Fruit, Wine and Brandy Industry.

to. All points have the same car-load rates, but the account is kept from these two points. I have prepared a table for 1899 which will explain the magnitude of the export trade in fruits. Much fruit is sent to San Francisco and other points in the State for local consumption, which is not included in the table. As

oranges ripen earlier in Northern California than in the Southern part of the State (another of our climatic peculiarities), the table is not a fair index of the extent of the citrus culture in the Sacramento Valley for the reason that much of this fruit is consumed in the State.

To move this fruit a car must depart every hour of every day in the year.

Statistics for 1899 show that 26,283 car-loads of the above named articles were shipped out of the State by rail from Northern California (including the region north of Tehachapi Mountains; i. e., outside of what is known as Southern California). Over one-third of the whole went from the Sacramento Valley. When it is remembered that the fruit shipments from the San Joaquin Valley (where the bulk of our raisins are grown) from the extensive and highly developed Santa Clara Valley (where probably 70 per cent of our prunes are grown), and from the Sonoma and Napa Valleys, are included in the total of 26,283 car-loads, it will be seen that fruit culture in the Sacramento Valley has attained large

SHIPMENTS OF FRUIT OUT OF THE STATE BY RAIL, 1899.

Tons of 2000 Pounds.

Place of Shipm't	Green Deciduous	Citrus	Dried	Raisins	Nuts	Canned	All Kinds
Marysville	6,423	1,967	7,377	365	162	7,507	23,801
Sacramento.....	53,951	374	9,485	619	867	7,328	72,644
Total.....	60,374	2,341	16,862	984	1,049	14,835	96,445
Carloads.....	6,037.4	234.1	1,686.2	98.4	104.9	1,483.5	9,644.5

proportions, and yet the orchards occupy but a small part of its arable lands.

It should be observed that of the wine and brandy shipped out of the State by rail in 1899, there were 6,173 carloads of wine (ten tons each) from Northern California, and only 278 carloads from Southern California. Of brandy made from grapes, 354 carloads from Northern California and five from Southern California. Besides, there was shipped by sea from San Francisco 1679 carloads of wine and 34 of brandy, and 147 carloads of wine and brandy not segregated on way bills.

One of the great drawbacks to Northern California in the past has been the large individual land holdings. For example, nearly the entire river frontage

Land no Longer Monopolized.
in Colusa and Glenn Counties, running back from the river also many miles, was owned by two men—one having 40,000

acres devoted entirely to wheat, and but one family residing on this vast domain. Other large tracts were held, not only in these counties but in nearly all the others. About the beautiful town of Chico lie some of the richest lands in the world, which have, like those referred to, and others, for all these years, been under the blight entailed upon the State everywhere by the confirmation of Mexican grants. The owners of these great ranchos were proud of their possessions, and were unwilling in their life time to yield them up. It is perhaps not to be marveled at, for these were principalities good to look upon, and gratified a not altogether unworthy ambition. But it was against nature and against the law of progress that this condition should continue uninterrupted. In Southern California the first breaking up of the great ranches began, and behold! beautiful towns and cities and colonies of happy homes on small areas have taken their place. In the San Joa-



Mt. Lassen, (10,400 ft.) and Manzanita Lake (5,400 ft.), Shasta County. The lake is half a mile long, a quarter wide, and 80 feet deep.



A GROUP FROM NEVADA CITY.—1. A. D. Town's Residence. 2. Methodist Church.
3 Residence of Supervisor W. H. Martin. 4. Sutton's Dairy. 5. Dr. Hunt's Residence.

quin Valley, about the flourishing city of Fresno, immense sheep walks have been turned into shady boulevards, which form the boundaries of the extensive raisin vineyards that have made Fresno County famous. In the charming Santa Clara Valley, in the picturesque Vaca Valley of the Sacramento, and other places I might mention, a like transformation has occurred. This is what is soon to happen throughout the Sacramento Valley. The decline in wheat growing, and the consequent unprofitableness of farming on a large scale; the scythe of the Great Reaper; the mortgage and the Probate Court; have done or are doing their perfect work. Land which in former years could not be purchased at any price, is now on the market in any sized tracts desired, and at prices not much above the value assessed for taxation. Notably the forty-thousand acre Glenn ranch in Glenn County; the world-famous Bidwell ranch near Chico; the Wilson ranch in the same vicinity. In all the counties, particularly the counties north of the south tier, fine, productive land, improved and unimproved, is now on the market at prices no greater than similar lands sell for in settled portions of the Middle West.

There has never existed in this valley what may properly be termed a boom in land prices. When

**Opportune Time
to Purchase Land.** movement took place in Southern California, and land went to enormous figures,

land prices advanced here in sympathy with the high prices asked in the South, and naturally, because the advantages here were in every way equal to those in the South. The effect was to retard purchases here, and this, added to the incubus of large land holdings, resulted in slow growth at the north. Again, successful orchard planting here had a tendency to advance prices of unimproved contiguous land. This had a depressing effect. These conditions have entirely changed, and the time is now most opportune for investment in the Sacramento Valley. The presence of an orchard does not give a fictitious value to adjacent land. To show that there is room for

as many as may come, statistics show that we have a population of 191,901, occupying 17,995 square miles, which is nearly eleven persons to each section of 640 acres, and not less than 60 per cent of these reside in the cities and towns.

Much of the literature relating to the earlier phases of social life in California gave a very false impression of

Educational, Churches, Fraternal Societies. the existing state of civilization, which still exists to some degree. I know from the questions asked

me by inquirers who write for information about California, that there is much doubt in the minds of many whether we have yet emerged from the state of semi-barbarism erroneously supposed to prevail during the exclusively gold-hunting period.

Presumably the citizens of a State that is the home of two great universities, whose public school system has received highest praise for liberality and advanced methods; in which are five State Normal schools; where free tuition is offered through all grades to the High School and through the State University, must have some conceptions of what is essential to a self-respecting and broad-minded people, and must themselves possess some of the attributes they would inspire in the youth. Sufficient to say that all the advantages which liberal appropriations of money and an intelligent selection of teachers can give, we possess in all parts of the State. In the establishment and support of church organizations, the Sacramento Valley has kept pace with other portions of the State. In all our towns and cities churches of the principal denominations are found. The charming out-door life keeps many away from active attendance at service, and no doubt this is noticeable by the visitor; but the church nevertheless has generous support.

I think our population gives greater encouragement to fraternal societies than in most States. These organizations have a sound moral basis, are charitable in their operation, and no one can doubt their helpful influence upon Society.

I have been frequently asked if Califor-



NATURE IN MOUNTAIN AND VALLEY.—1. Bald Rock, Butte County. 2. Canon at North Fork of Feather River, Butte County. 3. Ravine at Fair Oaks, Cal. 4. American River at Fair Oaks. 5 View of Fair Oaks, Cal.

nia offers inducements to young men and women. Emphatically I answer, Yes.

The Place for Young People.

It is not necessary to say more as to young women than that young men cannot succeed in this world without them, and where young men go, there also should go young women. In a word, the region of the State, of whose resources and industries I am endeavoring to give some adequate description, offers almost every industrial occupation which can appeal to an aspiring or ambitious young man. The country, though a half century old, is practically virgin, when its future possibilities are considered. Whether the young man whom I, for the moment address, desires to engage in some one or more of the many forms of agriculture open to him here—fruit growing, gardening, stock raising, dairying, or general farming—whether he may prefer the alluring but somewhat illusive occupation of mining, or has the necessary capital and inclination to enter upon lumbering enterprises, or prefers merchandising and general business, or may wish to be in at the genesis of manufacturing soon to take high place among our industries, or is to be among the fortunate ones to share the profits of petroleum discoveries believed to be imminent in this valley—in short, if this young man desires to begin his career in a most promising but comparatively undeveloped country, and begin, too, on equal terms with those who have borne the heat and burden of the day, past and gone, and who are anxious to turn over to a younger and more vigorous manhood the great work before the inhabitants of one of the richest regions of the earth, let him come, and come quickly, and if he is possessed of good American pluck and genius, he will find in his calendar no such word as fail. The world is looking to the young men of the country as the leaders of great enterprises; all the large combinations of capital turn to young men for managers; young men are the active forces in the large railroad and industrial corporations of the present day. The aphorism—"Old men for counsel, young men for war," may be justly paraphrased—"Old men for

counsel, young men for all the great activities of life." I have a right to say this because I myself fall under the ban.

Having given a general description of the valley and presented facts applicable

alike to nearly the entire region, let us

Industries by Counties.

make an excursion into the several counties and remain long enough in each

to catch a glimpse of the prevailing or distinctive industries there to be found. Obviously this sketch must be brief and wholly inadequate as a detailed description. We will enter the counties by the Southern Pacific lines of railroad that approach us from the east, and confine our excursions to places thus reached, with occasional mention of regions off these lines of travel.

Nevada County does not exactly stand on end, but its eastern boundary, where we enter the State,

—the summit of the

Nevada County. Sierras — is 8,000 feet above sea-level, while its western

and southern boundary has an elevation of only 600 feet. The population of this county is 17,789 and the area 958 square miles, of which 200,000 acres are agricultural, 60,000 grazing, and 350,120 forest land. I appropriate an excellent description given by the Grass Valley Morning Union:

"Thus it will be seen that Nevada County presents a varied and rugged surface, extending from the sandy plains of the Sacramento Valley to the snow-crowned crests of the Sierra Nevadas. The county is divided by the South Yuba River which crosses it in the northern central part, uniting with the middle Yuba near the western boundary. The western central portions of the county contain excellent agricultural, horticultural, and grazing land, and this section presents a pleasing scene to the tourist or home seeker. These sections are dotted with small valleys, containing the very finest of farming lands and wooded hillsides, with a large supply of fuel and fine rolling land, adapted to dairying and cattle raising. Along the western boundary citrus fruits grow to perfection, and the olive and other sub-tropical plants thrive well, and produce excellent crops. Through the central portion, where are located Nevada City and Grass Valley, the fruits of the temperate zone reach



CITRUS FRUIT GROWING IN BUTTE COUNTY.—1. Orange and Olive Orchard at Thermalito, Showing Table Mountain in distance. 2. Picking oranges at Palermo. 3. Picking lemons from young trees at Palermo. 4. Orange packing house at Oroville. 5. Irrigation ditch bringing water from the mountains. 6. Banana palm at Palermo.

the highest development in flavor. Especially is this true of the Bartlett pear. At an elevation of three thousand five hundred feet, as at Lower Hill, the apple attains a superiority not excelled in the world. The western section of the county is well provided with timber. The higher mountain regions are heavily timbered with forests of spruce, cedar, white and yellow, and sugar pine. The eastern portion of the county, or the Truckee basin, is where the timber wealth lies. Some of the largest saw mills on the coast are located in this basin. The temperature is comparatively mild during the year, in the middle portion, although from the different altitudes, extremes of temperature may be witnessed at all seasons. Thus, when summer days are warmest at the southwestern end of the county, the nights will be extremely chilly at the east end, where the bleak Sierras raise their snowy peaks. The nights are always cool and agreeable, even during the warmest days of summer. In Nevada City and Grass Valley there are but few days when the thermometer registers over 80 deg., and in winter it seldom falls below the freezing point. On the eastern side in the Truckee Basin, the thermometer often falls blow zero, at times registering 40 deg., thus making the harvesting of ice profitable. It is the infinite variety of climate, difference of elevation and picturesqueness of the landscapes that Nevada County presents, which make it particularly inviting as a home, and attractive to tourists."

The chief sources of the county's wealth are neither its ice-ponds nor its timber lands nor its agricultural products, but its mining actualities and possibilities. It is curious to note that in one end of the county natural ice is frozen for market while oranges are grown in the other end. An estimate of the gold product from 1849 to 1880 gives a yield of \$159,800,000, of which 105 millions came from the placer or gravel mines and the balance from quartz ledges. The aggregate to the present time is not far from 215 millions. Legislation and litigation have greatly interfered with placer mining in recent years, but it has resulted in increasing development of quartz mining, which is always the more permanent source of wealth. There are many beautiful lakes in the mountains, and charming summer resorts. Entering the county by the Central Pacific's overland railroad, the track winds around the mountain slopes in full view of Donner Lake, the scene of one of the most

pathetic tragedies attending the struggles of the argonauts of '49. Passing Truckee you are not long in arriving at Colfax, where you must stop and take the Narrow Gauge road to Nevada City, the county seat. You are then within two or three miles of the neighboring city of Grass Valley. These are both flourishing cities of several thousand inhabitants each. The two principal mining districts take the names of these cities. Some idea may be formed of their extent and importance when I tell you that in the edition of the paper to which I have referred, there is a description given of fifty-four quartz mines in the Grass Valley District, some of which are large producers and are known throughout the mining world, and all worthy of notice. In the Nevada City District, thirty-one are catalogued, and among these are some famous mines. Many drift gravel mines are also in this district, making excellent returns. The other principal towns are Truckee, Boca, North Bloomfield, Graniteville, North San Juan, and many other more or less important towns the centers of other mining districts and mining enterprises. Chicago Park is a modern place, on the Narrow Gauge road, where is located an Eastern colony, engaged in fruit growing. All parts of the county are finely watered; mining and irrigation ditches are seen everywhere, winding like serpents around rocky bluffs and along sunny slopes, at intervals furnishing extensive power plants.

Returning to Colfax, and resuming our journey on the Central Pacific, we are

soon at Auburn, the
county-seat of Placer County, elevation

Placer County. 1360 feet. Population of the county, 15,786; agricultural lands, 298,000 acres; grazing, 200,000; forest, 250,000. Like Nevada County, Placer has its eastern boundary in the high Sierras, and embraces the northern arm of the wonderfully beautiful Lake Tahoe, and the western boundary is well down in the Sacramento Valley. The railroad enters the county at Summit—elevation 7,000 feet—and in seventy miles Auburn is reached by a grade of nearly 100 feet to the mile.



IRRIGATION IN NORTHERN CALIFORNIA.

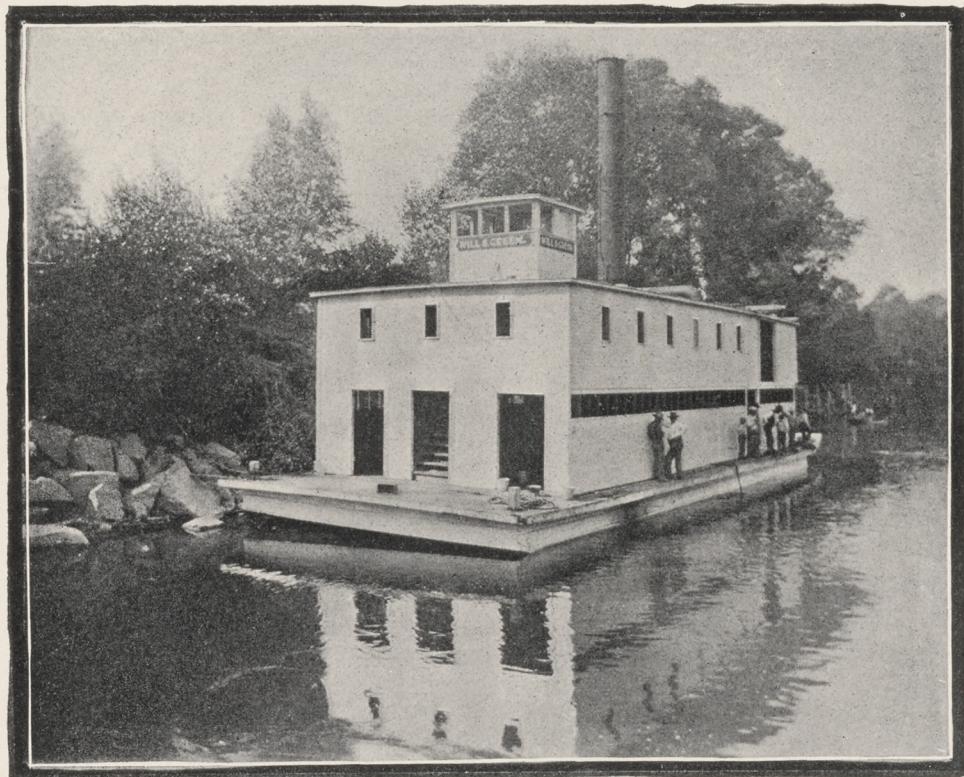
It is a wonderful ride down this noble mountain, and some marvelous engineering problems have found their early solution in the construction of the road as it winds in and out of great canyons and along the mountain slopes, where, on the lower sides are steep declivities hundreds of feet below. A famous instance is Cape Horn, overlooking the Grand Canyon of the American River. As one descends the scenery becomes more rugged and the towns more numerous. The quaint old mining towns, with their healthful climate and sparkling mountain water, are yearly becoming more noted as summer resorts, while the mining industry continues a prosperous one. A little lower and one enters the fruit belt, where citrus and deciduous fruits, nuts and grapes flourish to a remarkable degree, and mining is also a source of wealth. Going still further, the traveler will leave the foothills and find more sandy soil, rock quarries, and wheat fields, while interspersed are numerous thrifty orchards and vineyards. The "Promised Land" described in Deuteronomy had many of the characteristics of Placer County, if we may judge by the following: "For the Lord thy God bringeth thee into a good land; a land of brooks of water, of fountains, and depths that spring out of valleys and hills; a land of wheat and barley, and vines and fig trees, and pomegranates; a land of olive oil and honey; a land wherein thou shalt not lack anything in it; a land whose stones are iron, and out of whose hills thou mayest dig brass." A writer in the Sacramento Record-Union has truthfully said: "The County of Placer is probably the most favorably situated of any foot-hill county in California. The peculiar advantages this section possesses over all others consist in these: It has a soil that will raise all kinds of temperate and some kinds of tropical fruits. It has granite quarries containing a character of rock in point of solidity and lasting permanency unequalled in the State. Its timber belt in the northern part is practically inexhaustible. It has potter-clay beds at Lincoln, which make the best quality of terra-cotta ware, and the most substantial bricks are made here. The mining field is extensive, and

a large portion of it has scarcely been prospected. In size, Placer County is somewhat larger than the State of Rhode Island. As to its resources the State Mineralogist tersely says: 'The whole Atlantic sea-board can hardly equal the endless variety to be found within the borders of this small county, which rivals Florida in the quality of its oranges, excels New Jersey in peaches, equals the New England States in its granite quarries, and compares favorably with Maine in the quality of its lumber.'" Characteristic of Placer County around Newcastle, Auburn, and Penryn, is the early ripening of fruit. This region and Vaca Valley, Solano County, are competitors for first fruit shipments. The Newcastle oranges have a distinct reputation East. I recently met a gentleman residing in Lincoln, Nebraska, who told me that so long as he could get them, he bought no oranges except from Newcastle. As indicating the diversity of Placer's productions, the Assessor's office shows a considerable quantity of cereals, live stock (30,000 head of sheep and 7,000 head of cattle among them), large acreage in fruit trees of all kinds, of which 10,000 acres are in peaches; 1,200 in plums and prunes; 260 in olives; 220 in oranges; 1,200 in table and raisin grapes, etc.; hops, 50 acres. The Assessor's figures are generally below the maximum. Extensive lumber operations are carried on, and so of mining. At Lincoln are large pottery works, where are turned out quantities of drain and sewer pipe, flower-pots, tile, ornamental, pressed and glazed brick, terra cotta work of all description, and in short nearly every design ornamental and useful, that comes from a well-equipped pottery supplied with ample means and exceptionally fine quality of clay. The granite quarries are an important source of wealth to the county.

Indications lead to the opinion that petroleum will be found in Western Placer, and wells are now being bored. There are several large electrical plants in the county. Irrigation is generally resorted to in the orchards. As a health resort, Auburn has great favor, especially with those who suffer from kidney or pulmonary troubles. The city is sit-

uated on hills and vales—the latter 1000 feet elevation; the former 1,200 to 1,300. No more picturesque situation can anywhere be found. An eminent German writer, a resident of Minnesota, visited the county not long since, and being solicited to give his unbiased impressions replied in terms not only applicable to Placer County, but substantially to the whole valley. He said: "Once a year, in the spring-time, every country in the world has a few weeks of beauty; with

portunity to move into a winterless climate, and, my word for it, many of them will be citizens of this State before another year rolls round. Why should a man," he very pertinently asks, "who has small means, and is striving to rear and educate a family of children, live in Minnesota, Wisconsin, or Dakota, when the same investment here would add twice as much prosperity and happiness? Why should he pass a four-months' winter in-doors, burning expensive fuel,



Floating Pumping Plant. Pumping for irrigation on the Sacramento River.

you, however, it seems to be one perpetual spring and summer, the distinguishing characteristics of the seasons blend together in such a manner that they come and go imperceptibly. I am satisfied that my people will be satisfied with this country. They never have lived in such a climate, they have never had such opportunity to secure a cheap home, they never before have had an op-

portunity to move into a winterless climate, and, my word for it, many of them will be citizens of this State before another year rolls round. Why should a man," he very pertinently asks, "who has small means, and is striving to rear and educate a family of children, live in Minnesota, Wisconsin, or Dakota, when the same investment here would add twice as much prosperity and happiness? Why should he pass a four-months' winter in-doors, burning expensive fuel,

about my own section. Your lands are cheap, your railroad facilities good, and still extending, your fruits delicious, and your climate delightful." I invite careful consideration of the points made by this gentleman, for they must come home to thousands of people in the East whom we invite to come among us.

To show the distribution of the orchards in the county and the shipments of fresh fruit in a single year, it has been ascertained that for the season of 1900 there were sent East 1,640 car-loads of 26,000 pounds each. In small lots by local freight and express, 134 cars additional, making in all 1,774 car-loads, or 23,062 tons. Of the car-load shipments, 6 went from Lincoln, 11 from Roseville, 14 from Dutch Flat, 56 Colfax, 80 Auburn, 219 Penryn, 334 Loomis, and 920 from Newcastle. But we must not longer remain in picturesque Placer.

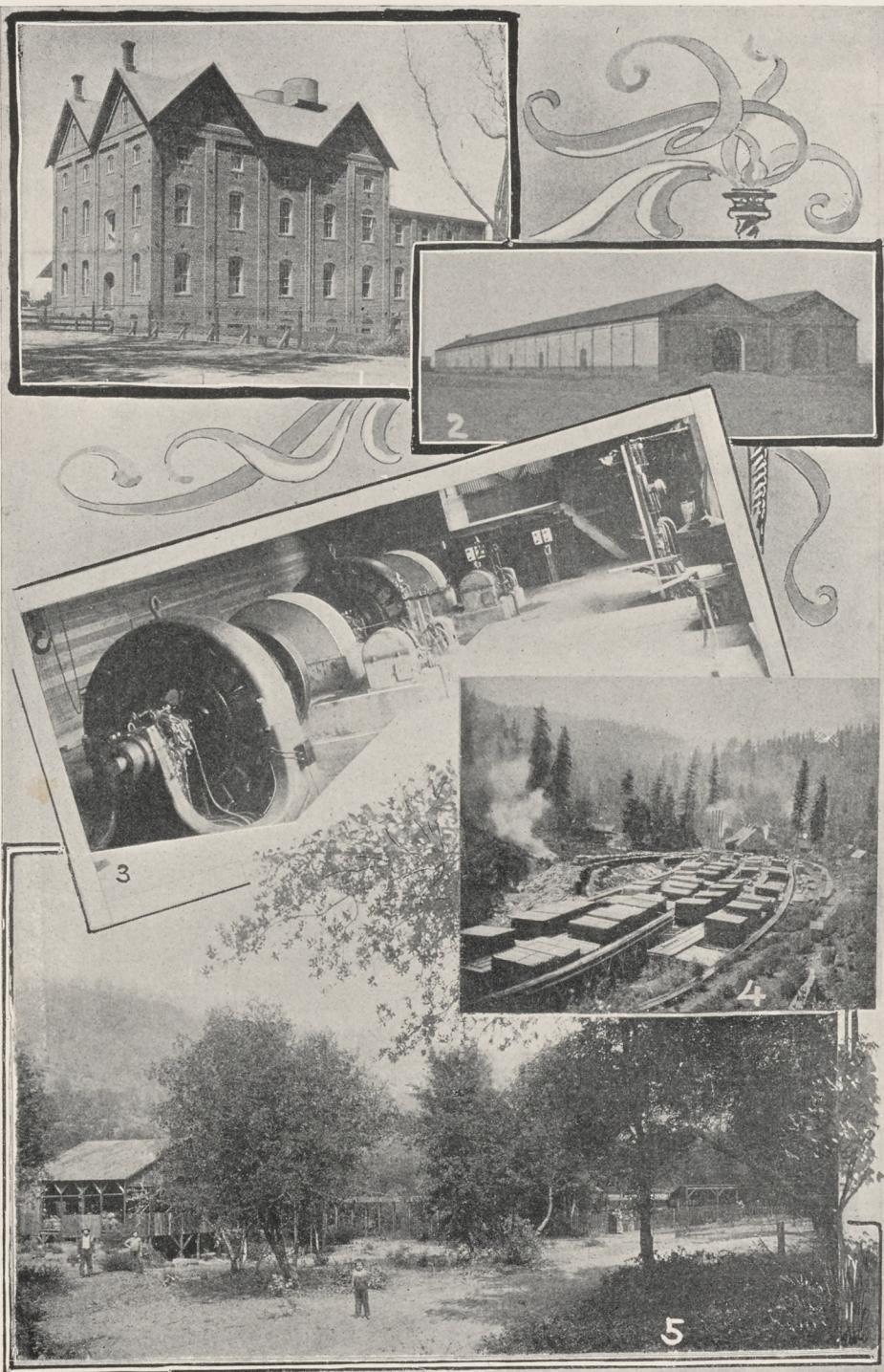
A few hours from Auburn brings us to the city of Sacramento, State capital,—

population of the
county, 45,915; of
Sacramento County. the city, 29,282. Of
the 619,520 acres of
land in the county,
about 600,000 are re-

ported as agricultural, the largest proportion of any county in the group. The land is generally level, excepting the eastern and northeastern parts, which are somewhat rolling. The Sacramento river, the largest water-course in the State, forms the west boundary from north to south; the American River crosses the upper portion of the county from east to west; the Cosumnes River runs through the eastern part, and on the south is the Mokelumne River. It will be seen that unlimited water supply is given to this county; its utilization is shown in part by the fact that 10,000 acres are in alfalfa (a plant requiring plenty of water). About 40,000 acres in the county are under irrigation. The diversified agricultural products are attested by the following facts, as shown by official reports: *Cereals*—wheat, acres, 108,000; barley, 13,800; oats, 92,000; corn 980; hay, 62,000. *Other Products*—Hops, 1,800; asparagus, 1,000. *Live Stock*—Sheep, 23,300; cattle, 13,680; horses, 8,100; mules, 590; large dairying inter-

ests, including two creameries. *Fruit*—Acres, apples, 72; apricots, 660; cherries, 141; figs, 41; peaches, 1,622; pears, 1,270; prunes, 1,900; almonds, 640; walnuts, 33; oranges, 370; lemons, 41; wine grapes 11,470; raisin grapes, 700; table grapes, 7,200. *Poultry*—One of the few counties in the valley in which poultry raising has assumed any proportions; it is a large and profitable industry; there are about one million fowls in the county. Irrigation is practiced on much of the fruit lands, both upland and river bottoms. The rivers and creeks run the whole year; land is irrigated largely also by pumping from wells; water in abundance is found at the depth of 20 to 50 feet. Cost of water per annum per acre by ditch or pipe line is: Vines, \$3.00; deciduous trees, \$4.00; citrus trees, \$5.00. Lake Tahoe is the chief mountain resort, 133 miles by rail. All our mountain streams abound in trout, and fine shooting is found in all the counties—both large and small game. In the Sacramento River are found many food fishes—salmon being chief, and running to its head-waters. Some years ago shad were planted, and now as high up as Red Bluff this delicious fish may be had in quantities greater and at prices cheaper than in the waters of the Atlantic. In Sacramento county are two thriving colonies—Fair Oaks and Orangevale, where about 6,000 acres are subdivided in small tracts. Small tracts in other parts of the county are obtainable. Prices, owing to the central location and quicker and larger local markets, are somewhat higher than in the counties further north or than in Placer or Nevada. Unimproved land is reported to me at the following prices: Upland, \$25.00 per acre; but land under water-pipe system and possessing other advantages sells for \$50.00 to \$150.00 per acre.

Fruit packing and canning is carried on to a large extent in this county, principally at Sacramento. In 1900 there were packed in the county, 230,000 dozen cans of fruit and 90,000 dozen cans of asparagus. The growing of asparagus is exceedingly profitable. There are three lines bringing electrical power to the Capital City, furnishing city lights and supplying nearly all the industries in the city. The horse-power generated is



BUTTE COUNTY.—1. Flour mill. 2. Grain Warehouse. 3. Dynamos. 4. Sawmill. 5. Paint Mill.

10,000. I quote from a pamphlet describing the resources of the county:

"Water Power—On the American River, 20 miles northeast from the city of Sacramento, is built a great dam, which is the first attempt to introduce the use of water-power upon a large scale within the State. The dam is constructed entirely of granite blocks, having a width at the top of 24 feet, at the bottom 87 feet, a height of 89 feet, and 650 feet long; stability, 7,979 tons. The powerhouse to utilize this great force of nature has six immense turbine wheels. This power is transmitted to the city of Sacramento as a propelling power for its

long-distance transmission, and supplies arc and incandescent lights and day-power. The rates for electric current are probably lower at the present time in Sacramento than anywhere else in the world."

Natural gas has been developed and is now being used in Sacramento for light and fuel; indications of petroleum also exist.

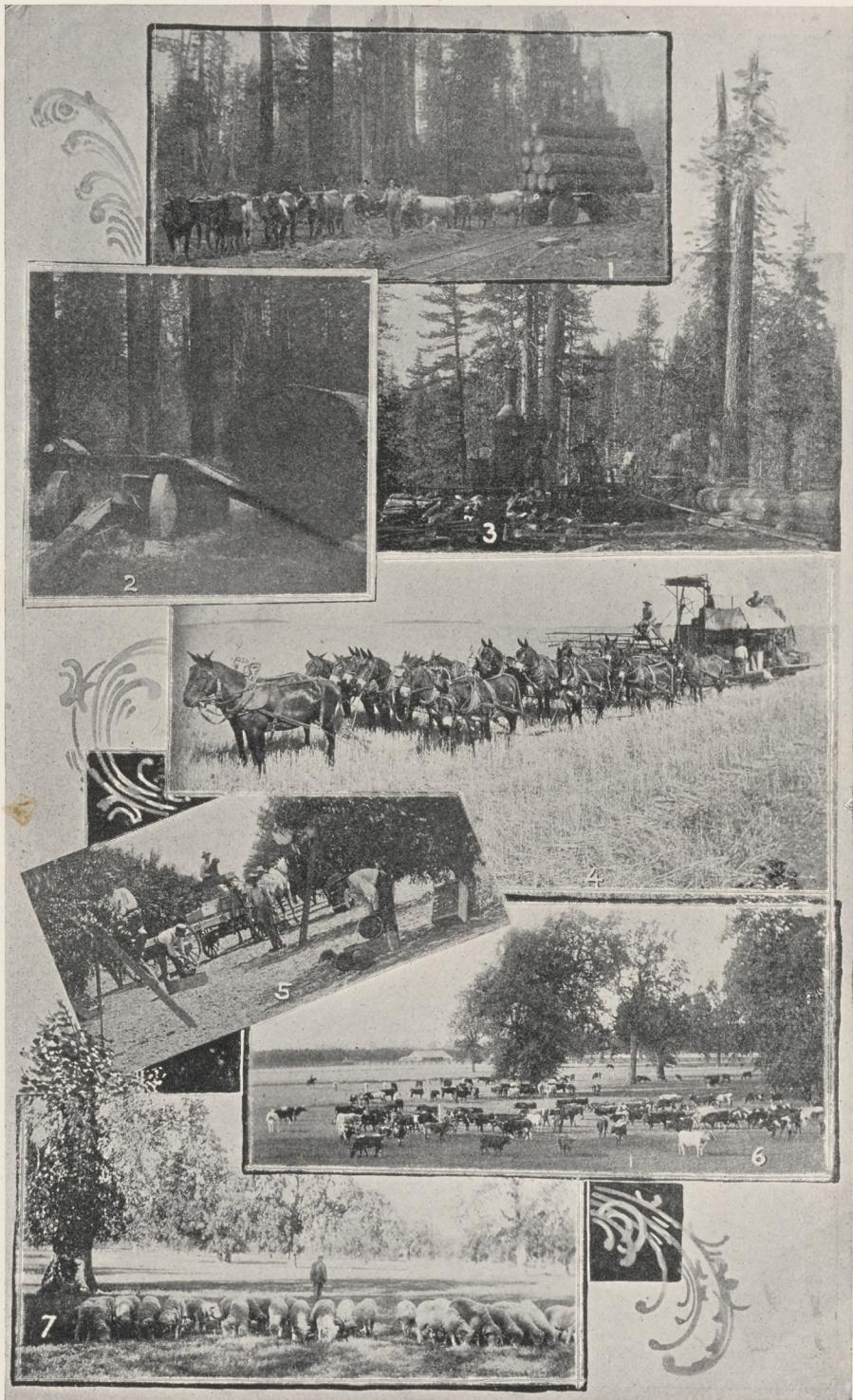
The Southern Pacific Company has extensive shops in this city, employing three thousand men. Sacramento is the largest city in the valley, and is a place of much commercial importance, and as the Capital of the State is a political



Head of Navigation, Sacramento River, at Red Bluff.

street-car system, and has been substituted for steam-power in mills and factories wherever available and desirable. Another source of power is the immense storage system of the South Yuba Water Company, in whose thirty-one reservoirs on the Divide and in the foot-hills of the Sierra Nevadas, two billion cubic feet of water are stored during the rainy season. Certain drops in altitude on the canals, in the towns of Auburn and Newcastle, are utilized to develop power, by pressure pipe lines and tangential wheels. Of this the Central California Electrical Company brings in 1,500 horse-power by

center. It is called the "Convention City," on account of its central location making it popular as a place for holding large assemblages. The State has at the Capitol building an extensive miscellaneous library, and one of the best law libraries in the Union. The public buildings rank high architecturally, and fairly express the civilization of our State. The park surrounding the Capitol is of great beauty, and is the pride of the city. A large wholesale business is done in the city, which is also the center of a large general trade, and the city is growing steadily in importance and



TEHAMA COUNTY.—1. Transporting Logs. 2. Loading logs on a truck. 3. Donkey engine chuting up logs. 4. Combined Harvester. 5. Picking peaches in Maywood Colony. 6. Cattle Raising. 7. A band of full-blooded Marino bucks.

wealth. Manufacturing is also carried on here, probably more than in any other city in the State, outside of San Francisco. It has an art gallery containing a collection of paintings and other works of art valued at over half a million dollars, and with the gallery is connected a school of design. The art gallery was the gift of Mrs. E. B. Crocker.

The social, religious, and educational advantages of the city are all that need be desired. The general Government has a building here which is a handsome edifice, containing accommodations for the Post-office Department, U. S. Land Office, Internal Revenue Department, and Uni-

ted States Weather Bureau. The location of Sacramento (practically on tide-water), the center of our railroad system, in the heart of the most productive region of the State, convenient for the cheap utilization of electrical power, with ample local capital and an enterprising population—these combine to give reasonable assurance that the city will become one of the chief commercial and manufacturing marts of the State. The climate of Sacramento is substantially the same as that of other parts of the valley. James A. Barwick, Weather Bureau Observer at this place, prepared the following illustrative table for a long period of years, including 1898:

	Average Winter Temp.	Average Spring Temp.	Average Summer Temp.	Average Aut'mn T. mp.	Average Yearly Temp.	Highest Temp.	Lowest Temp.	Clear Days.
Florence.....	44.3	56.0	74.0	60.7	58.8	.....	.....	.....
Pisa.....	46.4	57.2	75.2	62.8	60.4	.....	.....	.....
Genoa.....	44.9	58.6	75.0	63.0	60.4	.....	.....	.....
San Remo.....	48.9	57.3	72.4	61.9	60.1	85	25	218
Mentone.....	49.0	58.3	73.9	62.5	60.9	85	23	214
Nice.....	47.8	56.2	72.3	61.6	59.5	.....	.....	229
Cannes.....	49.5	57.4	73.1	61.0	60.2	85	20	.....
Average in Italy.....	47.3	57.3	73.7	61.9	60.0	85	20	220
Average in Sacramento County.....	47.0	60.0	75.0	61.0	61.0	+110	*19	238

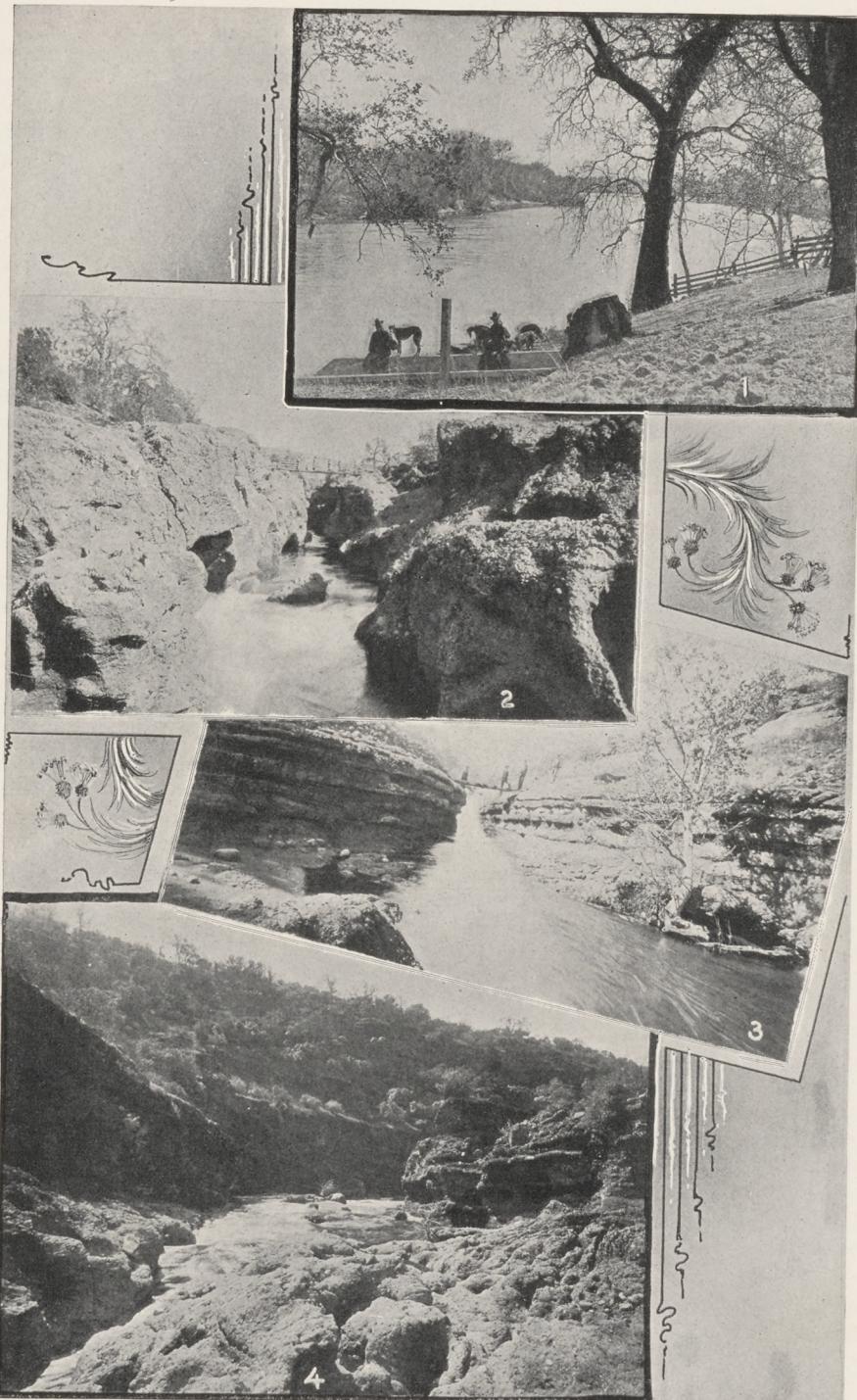
†Occurred but once in fifty-five years.

*Occurred but twice in fifty years—once in January, 1854, and once in January, 1888.

As showing what preponderance of clear sunshiny days is here enjoyed over the places named below, representing the climate of eleven States situated on the same line of latitude, as also the record of lowest temperatures, the following table, compiled from official sources, has been prepared:

PLACES.	Man Winter Temperature.	Lowest W inter Temperat ure.	Highest W inter Temperat ure.	Clear Days in Winter.....	Fair Days in Winter.....	Cloudy Days in Winter.....	Precipitation in Winter, inches.....	Average Rain- fall for Year Inches.....
Sacramento, Cal.....	48	74	19	39	28	23	11.85	238
Washington, D. C.....	35	78	-5	21	38	31	9.52	105
New York N. Y.....	32	69	-6	22	36	32	10.25	104
Columbus, O.....	32	72	-20	13	32	45	11.00	97
Chicago, Ill.....	28	68	-21	21	36	33	6.56	108
St. Louis, Mo.....	34	74	-22	25	33	32	7.74	122
Cincinnati, O.....	36	73	-17	18	31	41	11.51	99
Philadelphia, Pa.....	33	75	-6	20	36	34	9.21	107
Baltimore, Md.....	36	78	-7	22	39	29	9.64	118
Memphis, Tenn.....	43	79	-9	25	29	36	15.77	129
Vicksburg, Miss.....	50	83	-1	24	31	35	16.69	126
Savannah Ga.....	53	80	8	32	28	30	10.00	121
Louisville, Ky.....	37	78	-14	19	31	40	13.44	120
Atlanta, Ga.....	46	74	-8	26	32	32	19.16	121
								141

A dash, thus (—), before a figure indicates temperature below zero.



NATURAL SCENERY : TEHAMA COUNTY—1. Scene on Sacramento River (ferry).
2. Mill Creek Power Site. 3. Mill Creek Power Site. 4. Mill Creek Power Site.

It will interest the intending fruit grower to know the rates of transportation to the East. The carload rate is uniform from all railroad points of shipment. I give the figures in this connection once for all:

Dried Fruit, minimum weight 24,000 pounds, Chicago, New York and Boston:

In boxes, \$1.00 per hundred pounds
In sacks, \$1.20 per hundred pounds.

Deciduous Fresh Fruits, carloads, Minimum weight, 26,000 pounds:

To Chicago, \$1.25 per hundred pounds
New York, 1.50 per hundred pounds
Boston, 1.56 per hundred pounds

Resuming our journey westward, we cross the Sacramento River on a fine

steel combination railroad and wagon

Yolo County. bridge, and find ourselves at once in Yolo County.

For several miles we pass through what are known as tule lands, of which there are about 100,000 acres in this county. These lands are exceedingly rich and productive naturally, but being subject to the overflow of the Sacramento River are used mainly for grazing when the water is off. Plans for reclamation are projected, and doubtless ere long this fine body of land will be added to the 400,000 rich agricultural lands of the county, and will add many millions to its wealth and thousands to its population. Add 150,000 acres of hill and mountain grazing lands, and we have the area of the county about 1017 square miles. Yolo is an exceptionally fine county. Let me catalogue some of its productions:

Wheat, 250,000 acres; barley and oats, 60,000; hay, 20,000. Irrigation is practiced, as the 25,000 acres of alfalfa will attest.

Hops, 1,000 acres; vegetables (including the celery and asparagus beds), 5,000 acres.

Fruit Trees—22,000 acres, of which 5,000 acres are almonds, probably much more than in any other one county in the State; 4,000 acres of oranges, lemons, and olives, each of which thrives especially in Capay Valley; 2,500 acres vineyard, about equally divided between wine, raisin, and table grapes.

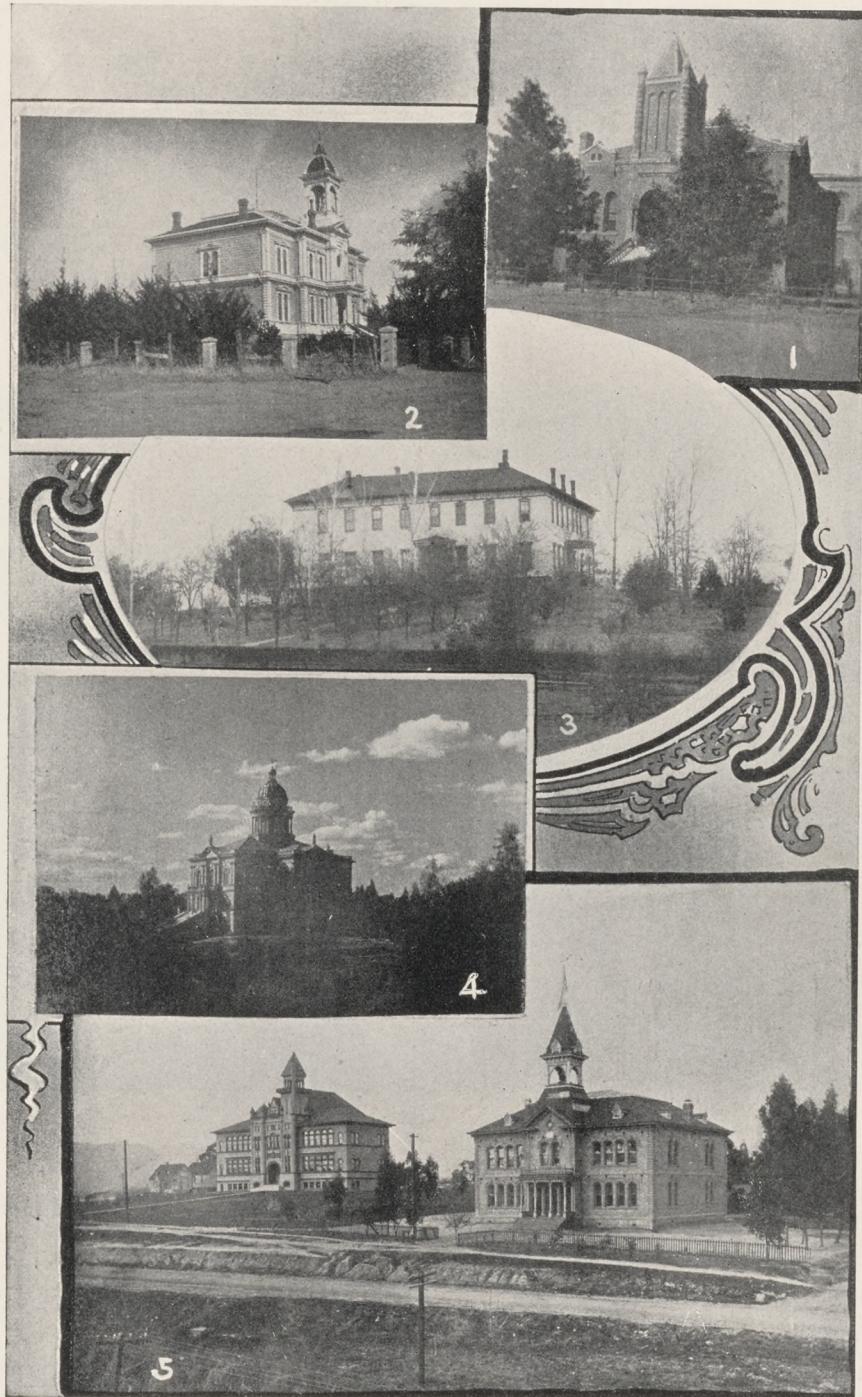
Live Stock—Sheep, 30,000; cattle, 15,-

000; horses and mules, 8,500.

Dairy Industry—This industry is the growth of about five years, a fact which shows how reluctant our farmers have been to adopt new methods of utilizing soil and climate. Conditions here are most favorable. Water is available for irrigation, and alfalfa grows most luxuriantly, and yet through a long period of depression in the prices of wheat the Yolo farmer, as in all the other counties, has been slow to adopt some substitute for wheat culture. The growth of the dairy industry has been greater around Woodland than elsewhere in the county, although an extensive creamery has been found necessary at Knight's Landing. The daily supply of milk at Woodland is 20,000 pounds and is increasing gradually. A skimming station five miles north at Cacheville has become an established industry, and here forty patrons deliver their milk. In one year the Woodland Creamery turned out 257,876 pounds of butter, which averaged 22 cents per pound for the year. I have not the figures for the Knight's Landing Creamery, but it is a close second to Woodland. To illustrate the situation in the Sacramento Valley, I frequently purchase Woodland Creamery butter in Red Bluff, Tehama County, where we should export, not import, this article of home consumption. Yolo is exceptional also in its attention to the poultry industry, which is quite extensive around Woodland and Winters. There are about 2000 bee hives in the county. Here again is one of the economies of the farm greatly neglected by farmers. With every condition favorable most of our honey comes from Southern California.

Strawberries are becoming one of the chief productions (in a limited way) and are furnished to the market as late as the middle of November. About 5,000 acres of land suitable for fruit culture are reported as available in small tracts at from \$20 to \$150 per acre, unimproved. Most of this land is near Winters (see map), some in Capay Valley, and other parts of Western Yolo.

Average winter temperature at this point is 48.3 degrees; summer, 77.7 degrees; annual, 62.8 degrees; highest, 102 degrees; lowest, 20 degrees. Lowest rain-



PUBLIC BUILDINGS.—1. Hall of Records, Yolo County. 2. Convent at Colusa. 3. High School, Placer County. 4. Court House, Placer County. 5. High School left, Grammar School right, Vacaville, Solano County.

fall here in last ten years, 10.26 inches; highest, 26.75; average, 16.59—less here than at Sacramento or the upper valley. This portion of the county feels the influence of trade winds from the ocean—hence the high temperature is less. In Woodland there is a winery, an olive oil pickling plant, and many fruit packing establishments. The first raisins were produced for the markets abroad, near here, by Dr. R. B. Blowers—gone to his rest, but of precious memory to all who

forty-five sections of land in the vicinity of Woodland. A concrete dam across Cache Creek is contemplated which will greatly increase the supply. Excellent sites for storage of water in reservoirs have been located on the heads of the streams. Pumping plants operating wells for water are also resorted to with success. In Capay Valley a large portable pumping plant moves from point to point and raises water to the orchards from Cache Creek. In this valley is located



A Date Palm, Butte County.

had the happiness to personally know him.

Irrigation is practiced in this county though not to the extent possible or profitable. There is enough water in Cache Creek and in other streams in the county, taken from this source, to irrigate 100,000 acres of land. The chief irrigation system is the Moore's Ditch, which passes through and touches

the Esparto Colony, fourteen miles west of Woodland, reached by macadamized roads and rail from Elmira. These lands are what was formerly known as the Bonynge tract (about 2000 acres of the Rancho Canada de Capay Grant). The location is on Cache Creek, an important stream, which is the only outlet of Clear Lake. The lake country was formerly volcanic, and the soil is composed of the

richest materials thrown out and mixed together by heat and other forces of nature—as we are told by an article written by one of a party of scientists in the employ of the United States Government several years ago. This rich detritus has been brought down by the spring floods for ages through the narrow canyons of the river, and as soon as the waters escaped from their confinement, spread out, and this rich material has settled here, and formed land that has no superior for strength and productiveness.

The places sold have been planted with all kinds of deciduous fruits. The orange and lemon make as good a showing as the best localities in the State. Early frosts are rare in the country around Esparto, so that the products are marketed much earlier than in some other parts of the valley. Clear Lake, of which Cache Creek is the outlet, about forty miles distant from Esparto, at an elevation above that point of 1640 feet (about thirty-eight feet fall to the mile), is a large body of water ten miles wide and thirty-five miles long. This great water and electric power cannot long remain undeveloped, and when the real development commences, this part of the county will be specially benefited. The Capay Valley lies near the Coast Range of mountains, along Cache Creek, and is an extremely beautiful region. Perhaps this outline sketch is as much as should be given space to show the general conditions of Yolo's industries.

We have many counties yet to visit, and cannot linger in beautiful Yolo, charming as nature has made it. Woodland is the county seat; the other towns are Yolo, Winters, Blacks, Capay, and Washington.

Solano County.

Resuming again our journey westward at Davisville, we enter Solano County upon crossing Putah

Creek, pass through Tremont, the brisk town of Dixon, Batavia, and are shortly at Elmira. Before going on further to the bay cities of Vallejo, Benicia, Fairfield, and Suisun, we must make a short excursion to Vacca Valley by a branch railroad line which leads through Vacaville, Solano County, and on northwest through

Winters, Capay, terminating at Rumsey, or Cache Creek, Yolo County. Look at the map and notice the relation of this country to this creek and to Clear Lake (whose outlet is Cache Creek), not far away, in Lake County, the Switzerland of California. In many respects Solano County possesses exceptional advantages, chief among which are rich lands and nearness and accessibility to the metropolis of the Pacific Coast. It has tide-water navigation at Suisun and Vallejo. The principal towns are Vallejo, 8,000 inhabitants; Benicia, 3,200; Vacaville, 1,350; Fairfield (the county-seat), and Suisun. The county contains 24,143 inhabitants. It will be seen from the map that it has a frontage on San Pablo Bay and Suisun Bay of many miles. Area of county, 911 square miles, of which are reported: 93,060 in wheat; 800 oats; 41,730 barley; 290 flax. Sugar beets, 2,750 acres.

The Fruit Industry is given in trees, which, calculated at 100 to the acre, gives: 3,086 acres of apricots; 379 cherry; 53 figs; 3,087 peaches; 2,035 pears; 2,559 prunes; 984 plums; 973 almonds; 65 walnuts; 820 wine grapes; raisin and table grapes, 318.

Live Stock—Given in values: Sheep, \$48,108; cattle, \$202,965; horses, \$51,812; mules, 61,333; hogs, \$10,580. Dairying industry is somewhat developed along the Sacramento River, and is increasing. Poultry interests valued at \$6,258. These figures are taken from the assessment roll, and fall, I think, much short of actual facts. Irrigation is not very much practiced. There is a large body of tide or tule lands in the county, used for cattle grazing. Incidentally it may be mentioned that the game preserves on these lands furnish fine shooting. There are several packing houses at Suisun, Vacaville, and Benicia; a cannery at Vacaville; a tannery and extensive works for manufacture of agricultural machinery at Benicia, and here also are the Government arsenal, and a military post. Most of the storage warehouses for grain shipments by sea are at Port Costa, opposite Benicia. Fishing is quite an industry—the salmon catch and other fishing in the bays and along the Sacramento River amounting to a considerable sum. The Gov-



1. Palms below Redding, 265 miles from San Francisco. 2. Vallejo Public School.
 3. Church in Chico. 4. Court House, Placerville. 5. State Normal School, Chico, Butte County.
 6. High School at Oroville, Butte County, where school children have oranges.
 7. Roman Catholic Church of St. Vincent, Vallejo. 8. I. O. O. F. Home, Thermalito.

ernment Navy Yard at Mare Island is in this county, and many of the artisans there employed reside in Vallejo. This splendid Governmental establishment, constantly increasing in importance, is a source of positive strength and wealth to Solano County, and gives employment to several thousand skilled artisans.

The Bay of San Francisco and its accessory bays, is of such magnitude and possesses so much interest to anyone who is looking toward California as a future home, that I have given in these pages a very fine representation of it.

The Bay Counties Power Company have just made a successful test at Vallejo of its long line for transmitting electricity, which is hereafter to be lighted and furnished with power through this means. The source of this power is Yuba River, 120 miles distant from Vallejo. The line will be extended to the city of Oakland, crossing the Straits of Carquinez at Benicia.

There are some delightful sub-valleys in this county, where the fruit industry is highly developed and which furnish the earliest fruit for market. These valleys are openings in the rolling hills, which constitute a distinctive feature of the county. Suisun Valley is one of these, but Vaca Valley is an especially notable example. Not many years ago this charming nook of some 5,000 acres looking southeast on to San Pablo Bay, but sheltered by a range of hills on the west and southwest, was a grain and stock farm. It has undergone the same transformation which occurred at Riverside, Fresno, and some other places in the State, and now there is a population of two or three thousand, and hundreds of happy and prosperous families enjoy comfort and ease, and many of them the luxuries of affluence, where cattle and sheep once roamed unvexed. There are some lands in the county open to purchase in small tracts at \$25 to \$150 per acre.

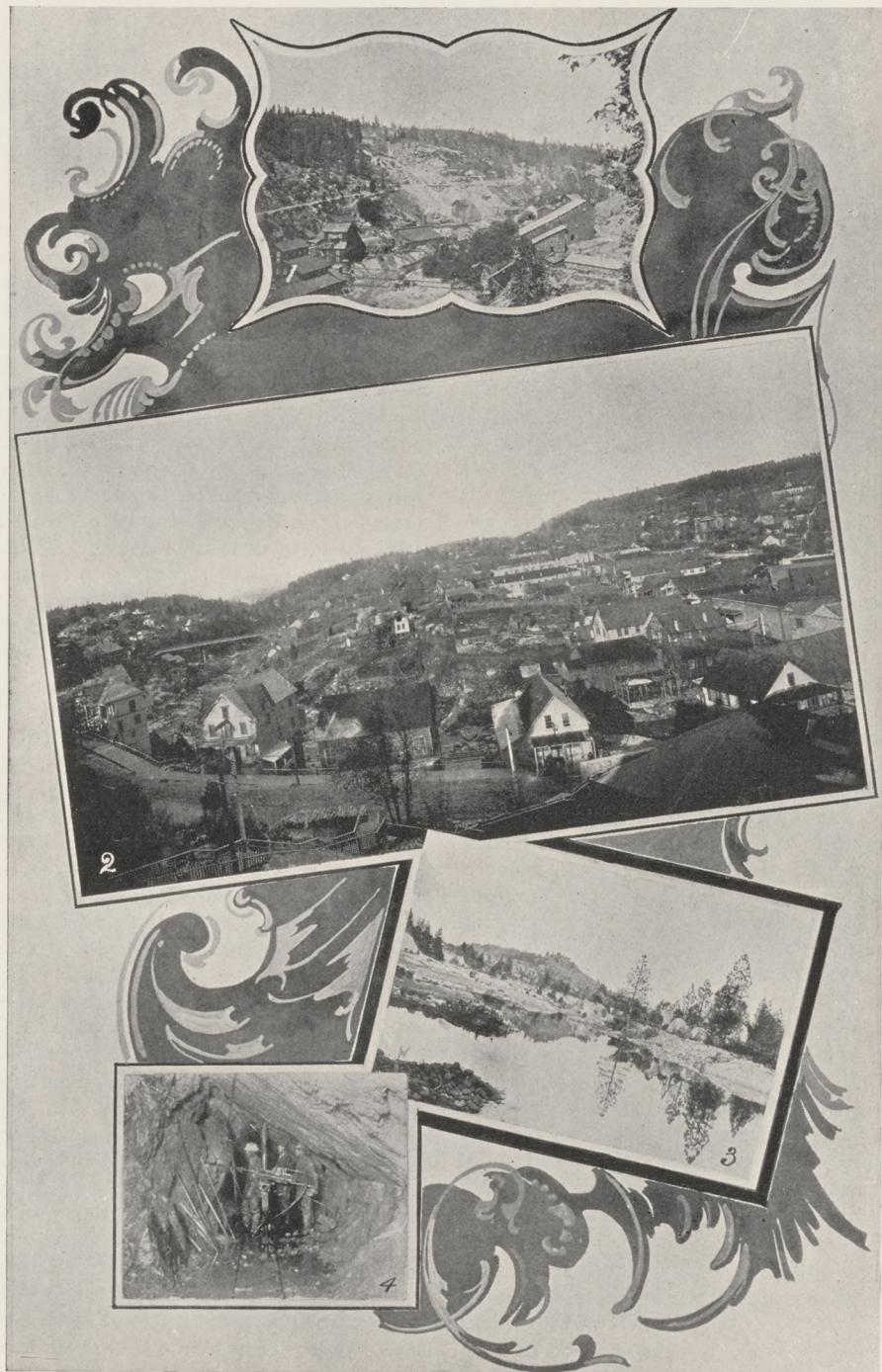
We will now retrace our steps. Returning to Sacramento, we take the cars for

Yuba County, passing through Lincoln,

Yuba County. in Placer County, and Wheatland, in

Yuba County, and we shall see near Reed as we go a large flourishing orange grove

of about 100 acres, just coming into bearing. We arrive at the city of Marysville, the county-seat and one of the oldest and most widely known cities in this part of this State, with a population of 3,397, more than one-third that of the county. The other principal towns of the county are Wheatland, on the railroad, 1,200 population; Smartsville, 500; Camptonville, 500; and Brown's Valley, 250, all in the eastern part of the county. Marysville is at the junction of the Yuba River with the Feather River, the latter being the west boundary of the county. This city, in its history, is associated with some of the most striking incidents of the earlier life in California, and has been the home of many of the most prominent men in the State. It has always had and still has a commanding influence in the affairs of the Upper Sacramento Valley. It has controlled quite an extensive jobbing trade in the mining regions, and in more recent years has been the storm center of the struggle between the hydraulic miners and the farmers in the valley—a struggle the bitterness of which I am happy to say has in a large measure, if not entirely passed away, and never involved, I am also glad to state, any very large portion of the valley people. It is to the credit of our citizenship that in spite of the great losses to the gravel miner by the ultimate decisions of the courts, he submitted to the mandate of the law with a loyalty and grace, under most trying circumstances, which must challenge the admiration of his adversaries as it has had the commendation of all good citizens. For many years there has been in successful operation in Marysville one of the best equipped woolen factories on the coast. Its output has found sale in all parts of the Union, and to some extent abroad. There are here two sash and door factories; a cold storage plant—capacity, 4,500 tons of ice per annum; one fruit cannery, with an annual pack of 150,000 cases; one flour mill, capacity 600 barrels per day; one foundry and two machine shops. Population of the county, 8,620; area, 625 square miles. It is bounded on the north by Honcut Creek; on the east by the high Sierras; on the south by Bear River, and on the west by the Feather. Yuba River and several of its



NEVADA COUNTY, CAL.—1. Quartz Mine. 2. View Nevada City. 3. Source of Water Supply. 4. Underground Mining.

tributaries traverse and drain the center of the county. Water navigation is good to Marysville by Feather River from the Sacramento. This advantage has made the city a terminal point on the railroad, which fact accounts in large part for its commercial importance.

The low or bottom lands of the county comprise about one-ninth of the county's area. The plains stretch out to the foot-hills, comprising a little over one-half the whole area, the foot-hills about one-sixth, joining the mountains which make up the balance, or two-ninths. The ridges of the foot-hills run north and south, nearly parallel with the mountain chain: and are interspersed with beautiful and fertile valleys and slopes. The lands may be approximately classified as follows: 45,000 acres bottom agricultural land; 221,000 plain agricultural land; 35,000 acres foot-hill, also agricultural; total agricultural, 301,000 acres; 60,000 acres grazing land and 39,000 acres forest and mining land. Wheat, barley, and oats approximate 180,000 acres; two-thirds wheat, one-sixth barley, and one-sixth oats; field corn, 2,000 acres; alfalfa, 4,000 acres; hops, 1,000 acres; potatoes, 600 acres; vegetable gardens, 300 acres.

Fruit Industry—About 2,000 acres deciduous fruits, besides many acres of nuts—almonds and walnuts. There is room for great expansion in fruit culture in this county. There are 600 acres of orange and lemon groves and 300 acres of olives. Orange culture has reached the point of providing a considerable export trade in car-load lots. There are about 500 acres of wine grapes in the county.

Live Stock—40,000 sheep; 9,000 horses; 4,000 mules. Stock run on the grazing lands throughout the winter months, with no other food and no protection.

Dairying—One creamery at Marysville and one at Wheatland, and one cheese factory at the latter place. As in most other counties, poultry is neglected, the farmer and dweller in the towns looking abroad for chickens and eggs.

The bottom lands along the rivers are not irrigated, being very moist, rich land. Higher lands are irrigated to considerable extent. There are four large irrigating systems in the county: Brown's

Valley Irrigation District has water for 26,000 acres; irrigates 3,000 acres. The Excelsior Ditch about the same capacity and irrigates about the same acreage. The Campbell Ditch, capacity 5,000 acres, and irrigates 500 acres. The South Feather water Company, capacity 10,000 acres; irrigates 1,000 acres. It will be seen that the ditch systems in this county are quite extensive, and their capacity much greater than any use made of them.

When we witness the scramble for water in the lower part of the State, and observe how every gallon is carefully conserved and used in the most efficient manner, it is amazing that so little heed is paid to irrigation in the north, where water is so abundant, and the lands generally strong and rich, and so capable of producing much more valuable crops than they do now. In Yuba County water can be had for \$2.50 to \$5.00 per acre, for the irrigating season. There are reported 20,000 acres at present open to purchase in small tracts, at prices from \$15 to \$40 per acre.

There is a saw mill at Camptown—capacity, 100,000 feet per day. Another at Oregon Hill—capacity, 40,000 feet per day.

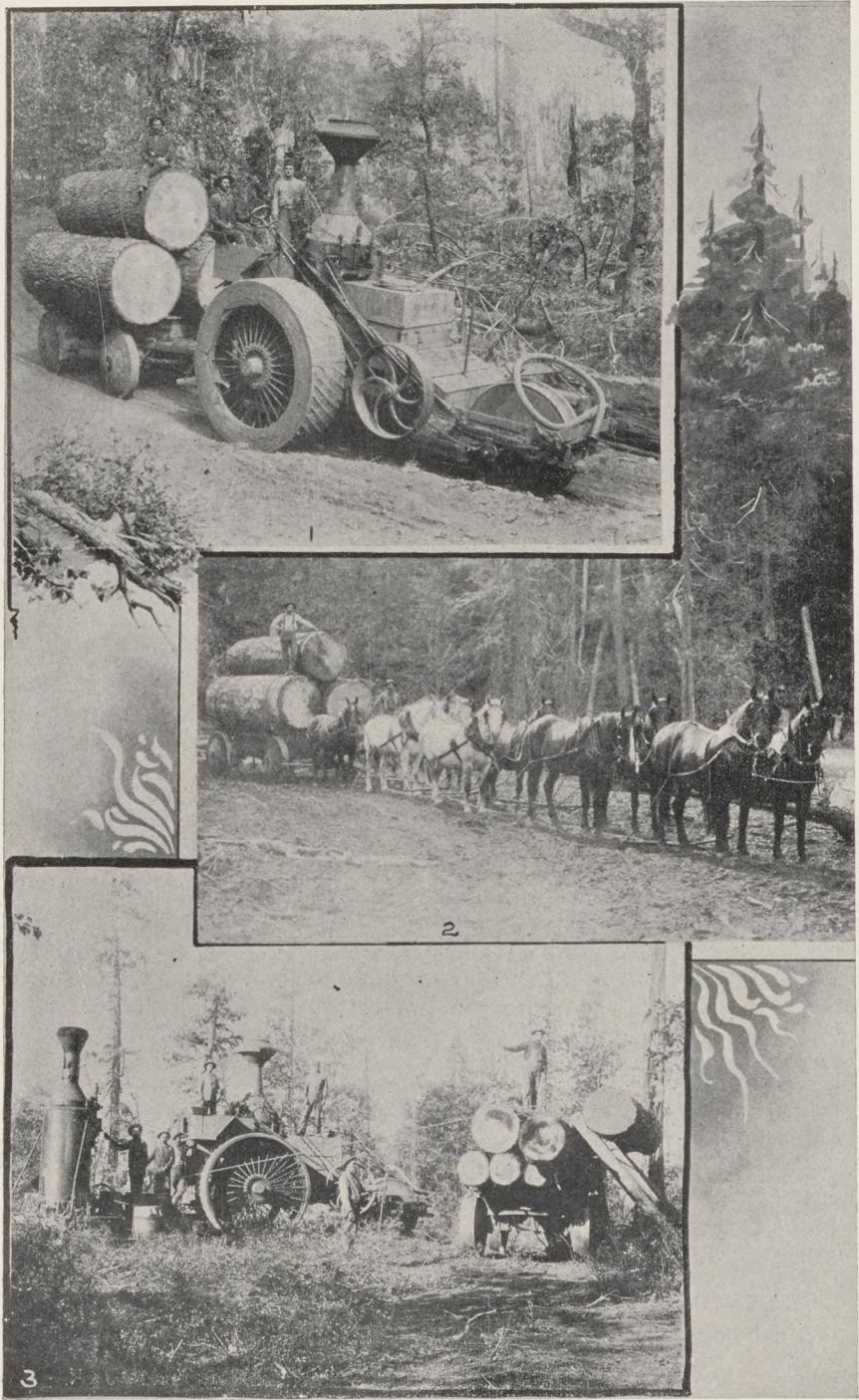
At Brown's Valley there are quartz mines whose gold output is about \$20,000 per month, with an operating expense of about \$8,000. Quartz mills are also in operation at Smethurst's Place, at Indiana Ranch, Brownsburg, and other places. Some hydraulic mining is carried on at Smartsville, and some sluice and drift mining. Dredger mining also on Bear River.

Crossing the Feather River at Marysville, you pass the boundary line between

Yuba County and
Sutter County, and

Sutter County. enter Yuba City, the
county-seat, the twin
of its companion,

Marysville, separated only by the Feather River, but bound together by a fine bridge, by a street-car line, and by social and business ties even stronger. These two cities and counties are so closely allied, and their interests are so interwoven that we think and speak of them as one. The railroad runs through the northeastern portion of Sut-



Placer County.—1. New Method of Hauling Logs. 2. Old Method. 3. Loading Logs.

ter, passing the towns of Lomo and Live Oaks, after crossing to the west side of the Feather. The Marysville Buttes rise abruptly out of the middle of the valley, at the northern part of the county, about midway between the Feather and the Sacramento, and present one of the most striking and interesting features of the general landscape. They reach a height of 1,200 feet. The slopes furnish fine pasture, and around the base lie the rich lands of Sutter. The county is bounded on the west by Butte Creek and the Sacramento River, and on the east by the Feather. Butte County is the north boundary, and at the south the east and west county boundaries converge at the junction of the Sacramento and Feather Rivers. The area is 611 square miles—about the same as its twin—Yuba County.

Sutter County is the only one lying wholly in the Sacramento Valley, and excepting the Buttes all the land is level. Of the 391,000 acres, about 125,000 acres are tule, or lands which overflow, but when reclaimed by levees are of nearly inexhaustible fertility. These tule lands lie between the Feather and Sacramento at the south end of the county. Some ten or fifteen thousand acres of these lands in the northern portion have been reclaimed, and are exceedingly productive. Irrigation is deemed unnecessary on most of the lands in Sutter, and successive crops of alfalfa each year are produced without applying water artificially—the roots reaching sub-surface moisture in abundance. The population of the County is 5,886, and generally the lands are not in large holdings.

Wheat growing is more profitable here than in most counties, on account of the yield per acre and less expense in planting—40 to 50 bushels being not an unusual yield.

Large quantities of vegetables are produced on the rich lands of Sutter, and hops are largely grown.

Horticulture—which means fruit growing with us—has become of leading importance, the crop being quite certain and very abundant. The Briggs peach orchard is celebrated throughout the fruit growing world, and it was here that fruit growing for market was early introduced. In Sutter County the celebrated

Thompson seedless grape was propagated, from which the best seedless raisins are made. This is one of the most prolific bearers of all grape vines, and at this time probably the most profitable. It is a small white grape, entirely seedless, growing in huge clusters, very compact on the stem; matures early and evenly; yields from ten to fifteen tons to the acre, easily cured, making a pound of raisins from three and one-half pounds of grapes; the fruit is delicious to eat fresh from the vine.

Much of the fruit grown in the County goes to the Marysville canneries; large shipments are made of fresh fruit to the Eastern States and to San Francisco, and a large quantity dried. Estimated acres in cereals, 120,000; acres in fruit, 5,000; hops, 125; garden, 2,000; oranges, 25; grapes, 500.

Livestock raising is also among the industries of the county and is conducted more on the system in vogue in the Eastern States than in other counties, and the animals are generally of a superior quality.

Sutter is the only county in the group where local option has banished the liquor traffic. The few people in Sutter who have the lingering appetite for strong drink, must go to Marysville for their tipple. Whether this fact adds to the business of the street car line I am unable to say—probably,—well I will not guess.

All in all, this is a county whose population compares favorably with any in the State, socially and morally. The schools are good and the people law-abiding, industrious and progressive. The tax-rate is among the lowest in the State, and there are few delinquent tax-payers.

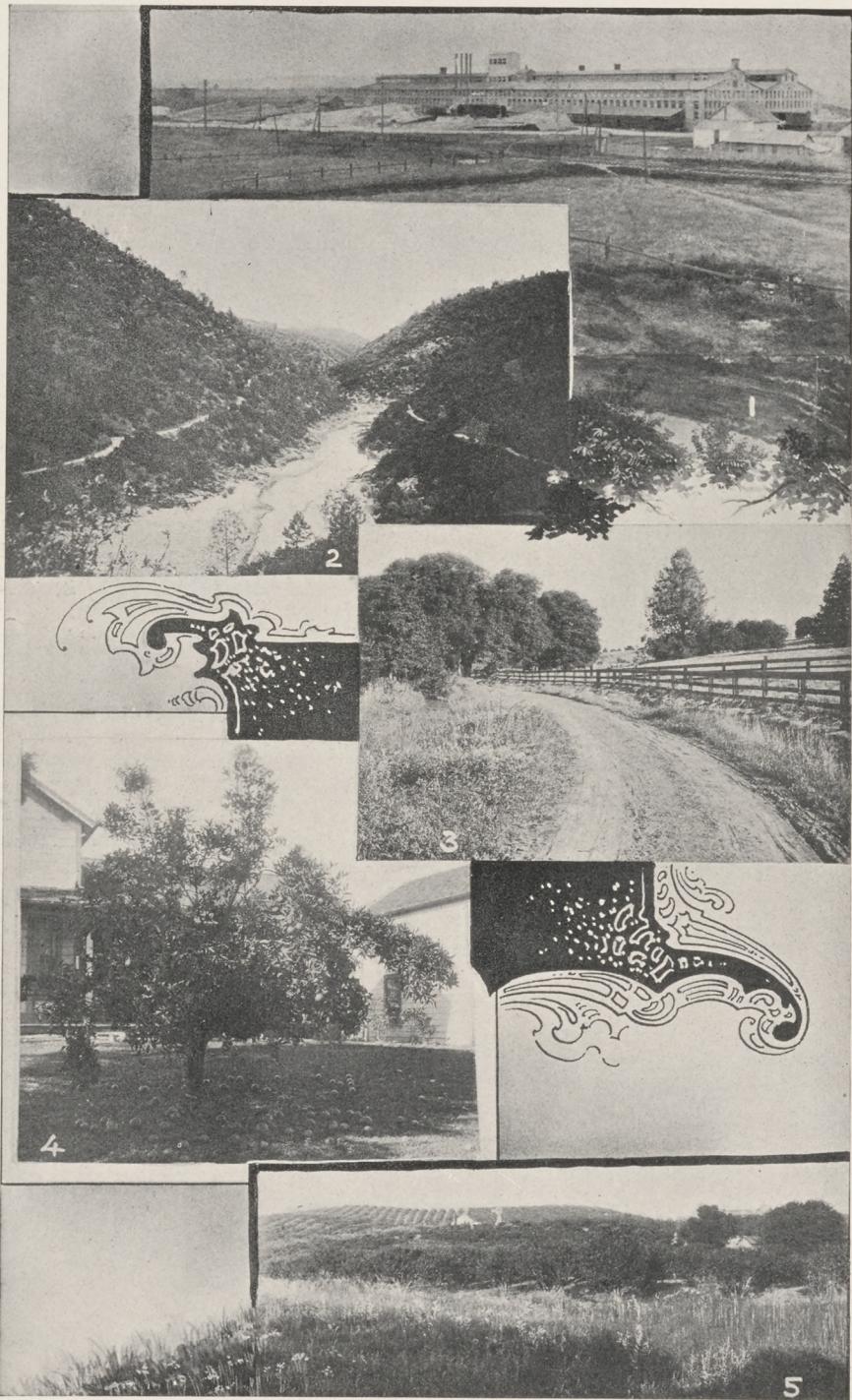
For an examination of Butte County, the visitor should first see Oroville, going

by rail from Marysville, passing thro'

Butte County. Honcut and Palermo.

He may then return to Marysville by

rail, resuming his journey by the Southern Pacific Company's line, leading to Portland, Oregon, which takes him through the towns of Gridley, Biggs, Nelson, Durham, to the beautiful town of Chico. He will find much to interest



PLACER COUNTY.—1. Pottery Works at Lincoln. 2. American River Canon from Auburn. 3. Drive near Auburn. 4. Orange Tree at Newcastle. 5. Orchards near Newcastle.

him in this county—ranking fifth of the group we are examining in population, third in assessed valuation. Area, 1773 square miles, ranking third after Shasta and Tehama in size. Population, 17,117. Principal towns, Chico, 2,640, with a suburban population of 1,000, where is located a State Normal School; Oroville, the county-seat, 2,237; Biggs, estimated, 850; Gridley, 850; Palermo, 500; Honcut, 400; Cherokee, 400; Forbestown, 400; Thermalito, 500.

The State Normal School at Chico

ninety per cent are known to have been in the employ of the State and over seventy-five per cent are now so employed. The school offers a four year course for graduates of the ninth grade, a two year course for graduates of accredited High Schools, and a two year course for preparation of kindergarteners. It is essentially a school for the training of teachers.

The Normal building is situated a few rods from a mountain stream, near the center of a campus of eight acres. The campus is ornamented with a magnificent growth of trees and flowers and equalled by only a few of the vast



A Summer Camp near Summit of Coast Range, altitude 6500 feet.

deserves more than passing mention, as it is the principal educational institution in the Sacramento Valley. It was established by act of Legislature in 1887, and opened in September, 1889, enrolling a total of 110 pupils the first year. I quote from a letter by President C. C. Van Liew:

"The enrollment in 1899-1900 was 377. During the past four years there has been an increase in the total work of the institution of over fifty per cent. Up to January, 1901, the school had graduated 366 teachers. Of these over

properties owned by the State. The building is a fine modern structure of twenty-eight rooms, finished in white cedar and equipped with physical, chemical and biological laboratories, libraries, apparatus and materials for thorough and efficient work in all departments.

In addition to its functions as a repository for scientific and historical collections the museum at this normal is both a laboratory and a workshop. It is a place in which a large share of the microscopic work, dissecting, science, reading, study, and recitations are carried on. It contains six alcoves nearly

30 feet square, and a corridor between the cases, 80 feet for dissecting tables. The alcoves are used for recitation rooms, workshops, offices, library, and study tables. One room has been especially fitted up for projection work, photo-microscopy, and photo-micrography.

The museum already contains a large number of valuable specimens in all lines of science, a large share of which were mounted by students.

The library consists of over 8,900 volumes selected, classified and arranged for the convenience of the work in the various departments, free access to the shelves is allowed, with the object in view of encouraging students to become familiar with books and methods of library investigation.

The "Normal Record" is a monthly journal managed by the students. Its contents are largely contributed by the students, and its business management rests in their hands, so that it offers excellent opportunities for training in journalism and the conduct of business. In addition to this, it aims to serve its readers with reading matter of value, and to be a medium of thought-exchange between students, alumni, and faculty.

There are a Young Men's and a Young Woman's Normal Debating Society, which are doing very active and efficient work in practical training of their members for public speaking. During the spring of 1900, a series of medal-contests were held, which greatly stimulated the growth and interest in the work of these societies. These will probably be continued in the future.

Finally the students maintain two religious organizations,—the Young Women's Christian Association, and the Young People's Christian Temperance Union. The character of the school is in part sustained by the spirit of these associations.

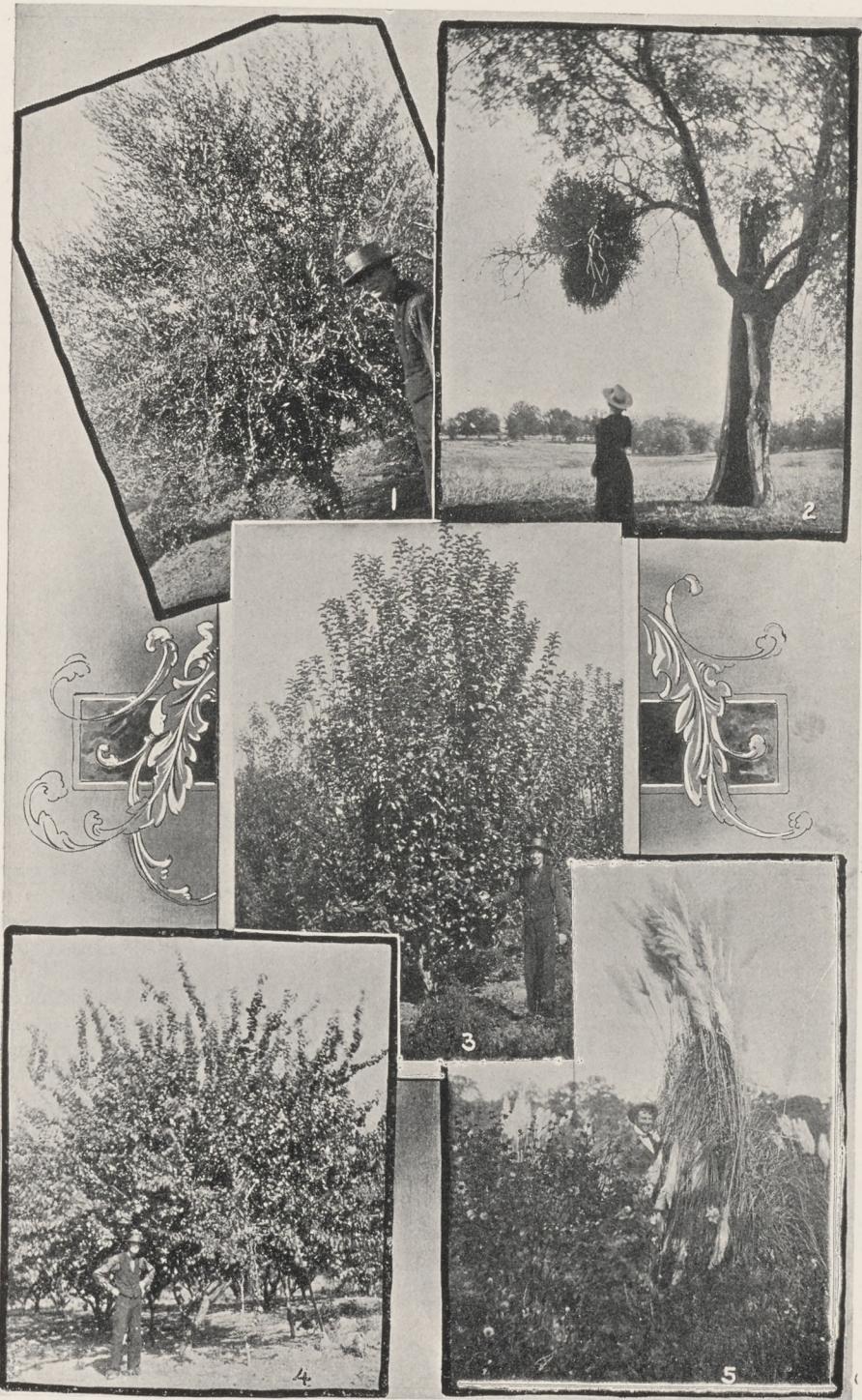
The Training School is open to the children of Chico and vicinity, or to any who wish to make special preparation for the Normal course.

About two miles from Chico the State maintains a Forestry Station of forty acres, a donation from General Bidwell. For the past ten years experiments have been made in the planting of trees to determine what varieties are best suited to this soil."

Butte County lies on the eastern side of the Sacramento valley, and upon the western slope of the Sierra Nevada mountains—extending from the Sacramento River on the west to the summit of the most westerly range of the Sierras on the east, and is divided into level valley, rolling foot-hill land, and rugged moun-

tains, about equal parts. The valley portion is level, devoted mainly to growing grain. The central portion, rolling land, rises gradually into low foothills, the rise continuing gradually toward the high mountains on the east. The characteristics of these mountains as elsewhere is that they are deeply cut by canyons, where swift streams plunge madly over rocky beds with innumerable water-falls. The scenery of Eastern Butte is grand and beautiful beyond description, and on these mountains coniferous forests abound. The principal mountain stream is the Feather River, with which we became acquainted in Yuba and Sutter counties, and which is altogether one of the most important rivers in the State, draining as it does, with its tributaries, about 4,000 square miles, and carrying in its bed to the valley at its lowest stage water estimated at 100,000 miners' inches. (A miner's inch is that quantity of water which will flow through an aperture one inch square under a four-inch pressure each minute—about nine and one-half gallons.) Butte and Chico Creeks are also important streams in this county, and furnish water for irrigation and for developing electrical power. Probably two-thirds of the land in the County may be classed as agricultural, and in many parts of the mountains there is more or less land under cultivation. Timothy grass is a valuable crop in mountain valleys, and the lumbering and other operations in that region furnish ready market at good prices for mountain products. Over one-third, and less than one-half, of the land in the county is under cultivation, and nearly all the land not cultivated is grazed. The mountains are heavily forested—the commercial woods growing at elevations between 2,000 feet and 5,000 feet.

Cereals—About 320,000 acres are devoted to grain growing; Alfalfa—1000 acres; Hemp—500 acres, very profitably grown on the Feather River bottom lands near Biggs and Gridley. The hemp plant grows luxuriantly, attaining a height of from 12 to 14 feet, and the fibre is excellent. Specimens may be seen in the exhibition rooms of the State Board of Trade in San Francisco. There are thousands of acres adapted to the sugar



SACRAMENTO COUNTY.—1. Four year old olive tree. 2. Under the mistletoe. 3. Apricot tree 21 feet high and four years old. 4. Four year old apricot tree. 5. Pampas plumes.

There are three flour mills in the county, at Chico, Oroville and Durham. The Chico plant is one of the largest and finest in the valley. It has a capacity of 200 barrels, and it is operated by electricity, generated by water power fifteen miles away. The Oroville flour mills are operated by water power applied direct and have a capacity of 130 barrels per day.

Butte has a paint mine and paint mill. * * * Yellow ochre, Venetian red, brown metallic, umbre and sienna are produced. The ore carries free gold in sufficient quantities to pay the expenses of mining.

Cement has been discovered near Pentz and tested by experts who pronounce it equal to the best Portland cement.

The oil-mining excitement has reached Butte County and two wells are being bored at the present time, one near Chico, and the other near Oroville.

The mountain streams afford excellent opportunities for establishing power plants. The Butte County Electric Power and Lighting Company, with its plant on Butte Creek, is now generating daily 1,200 horse power, and is selling its power to mining dredgers on Feather River below Oroville and furnishing power to light the city of Chico, to run the Chico flour mill and other machinery in that vicinity. The company is now disposing of about 800 horse power, and will shortly furnish to the Biggs & Colusa Power Company 500 horse power to be used in propelling machinery, pumping water for irrigation and drainage and lighting purposes. Contracts have been let for additional dynamos and generators to generate 2,000 additional horse power. The machinery is expected to be installed and in active operation by May 1, 1901. Companies using this power to operate their dredgers speak of it in the highest terms. Power from the Bay Counties Power Company's plant is also used to operate dredgers near Oroville. The plant is situated in Yuba County.

Mining has always been one of the important industries of this county.

The greatest interest is being taken just now in the mining dredgers operating on Feather River near Oroville. The first successful gold dredge began in the spring of 1898. The company which built the first machine now has three in operation. There are nine dredgers at work at the present time; two are building and almost complete, while four more have been planned for and will probably be under construction soon.

Good common schools under one of the best State systems in the Union. Number of public school districts, 76; number of teachers, 114; number of school child-

ren, school age, 4348; two high schools; one State Normal School at Chico.

Orange groves are in all valley parts of the county, and up to an altitude of 1,000 feet.

The olive grows in the valley and foothill portions, and as high as 1800 feet above sea level. It bears heavily.

There are three creameries, one each at Chico, Oroville and Biggs, all idle because farmers will not patronize them.

Good land can be had at \$15 per acre, five or six miles from the railway under ditch. (This must be foothills more or less covered with timber and chaparral. No good bottom land can be bought at this price.—N. P. C.)

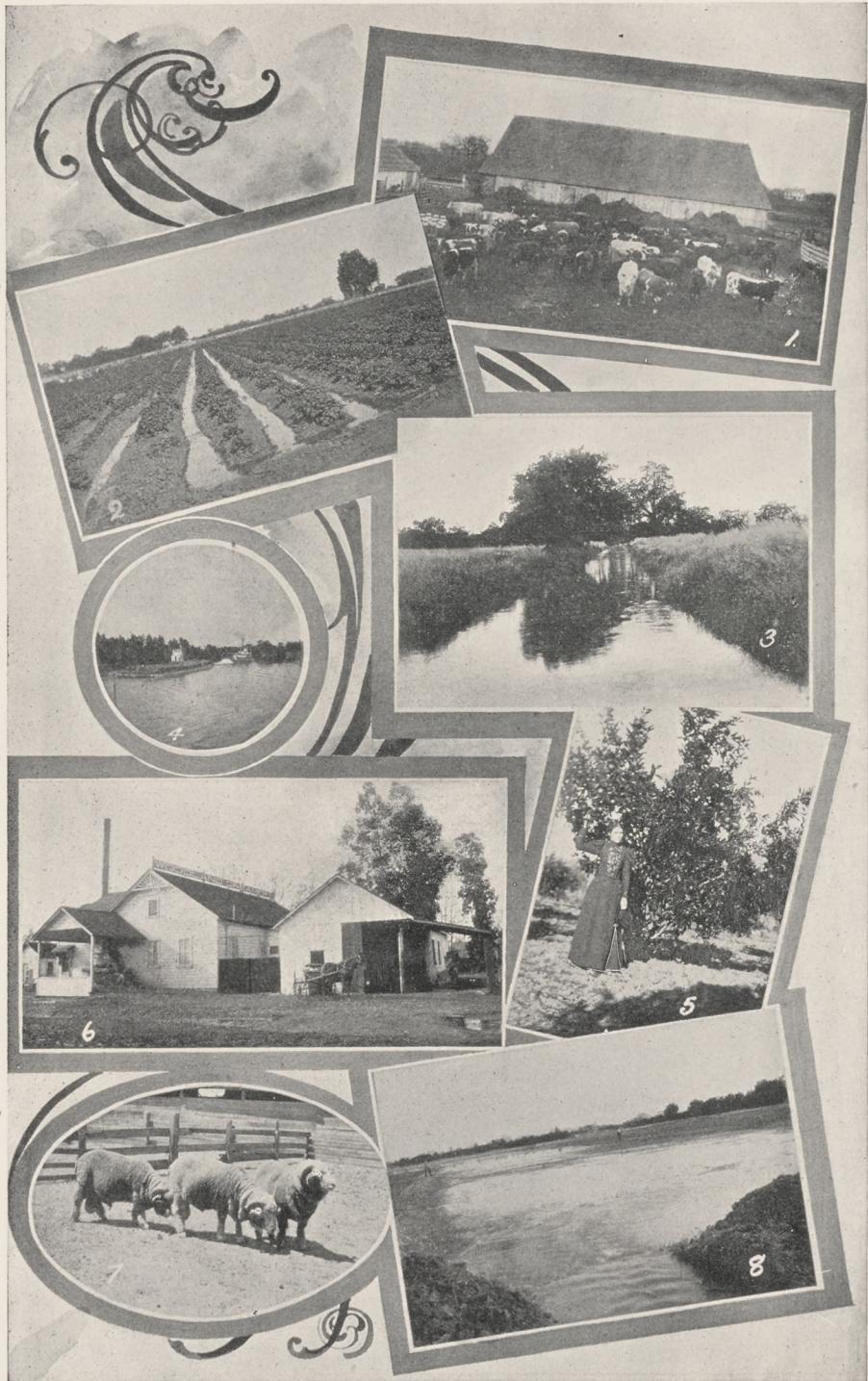
Snow falls in the mountain regions sometimes to a depth of ten or twelve feet at the higher altitudes. Within twenty miles of the orange orchards at Oroville snow falls every year, and strange as it may seem, the greater the snow-fall the better for the orange industry. To the heavy snow-fall is due in part the abundant summer supply of water. Along the lower edge of the snow line it melts rapidly, but at higher altitudes, it lies on the ground much of the summer, and, melting gradually, adds to the water supply.

To home-seekers Butte County offers all the advantages of cheap land, abundant water already diverted and ready for use, of equitable climate, good schools and social advantages. The opportunities she offers to those who would till the soil or delve for minerals are unsurpassed."

Mr. Beard's enthusiasm for his county is characteristic of Californians, but it is fully justified. What he says, however, applies not alone to Butte County, but is equally true with slight variations in all the counties. It is because in describing Butte he is describing other portions of the valley that I have quoted from him so fully.

It should be added that the large and beautiful rancho, near Chico, formerly belonging to General Bidwell (now deceased), is being sub-divided into small tracts for sale to settlers, and so also is the Wilson rancho next north of the Bidwell property.

Colusa County. The west side of the valley is bisected by the Southern Pacific Company's railroad which leaves the main line at Davisville, Yolo County, and unites with the road traversing the east



YOLO COUNTY.—1. Dairy cows. 2. Strawberry patches near Woodland. 3. Moore's Ditch, chief irrigating system of Yolo County. 4. Scene on Sacramento River. 5. Naval Orange Orchard, Capay Valley, Cal. Trees four years old. 6. Creamery. 7. Spanish Merino rams. 8. Irrigating alfalfa field near Woodland.

side, at Tehama, and thence continues to Oregon.

Colusa County lies nearly west of Sutter County. Some of its lands are on the east side of the river. Population, 7,346. Chief towns: Colusa, the county-seat, situated on the Sacramento River, reached by narrow gauge line from Colusa Junction, has population of 1490, and with its extensions, 2200; Maxwell, 400; Williams, 500; Arbuckle, 550, on main line of railroad. From Colusa Junction, the narrow gauge railroad runs west to the foothill town of Sites. Area of county 1,150 square miles. The eastern portion of the county—a little over one-half its area—lies along the western border of the Sacramento Valley, and is rich in natural resources and beautiful in its scenery. The western portion consists of foothills and mountains, interspersed with small lovely valleys for which nature has done much and man but little. Agricultural land, 450,000 acres; grazing, 256,000, and mountain, 30,000. The agricultural lands are devoted to: Wheat, 180,000 acres; barley, 59,500; oats, 1,000; corn, 1,500; hay, 8,000; alfalfa, 3,000; sugar beets, 1,000, showing high per cent of sugar and purity; vegetables, 500 acres.

Fruit Industry—Not greatly developed; about 1,500 acres of deciduous fruits; citrus fruits, 40 acres; oranges apparently do well. 500 acres raisin grapes; 40 acres wine and 20 acres table grapes.

Live Stock—Cattle, 8,150; hogs, 20,350; sheep, 17,000; angora goats, 1,000; mules, 3,250; jacks, 27; horses, 4,286, as shown on assessment roll.

Dairying—3 creameries. Poultry interests considerably developed.

The bottom lands along the river are protected from overflow by levees, and these in turn furnish opportunity for winter irrigation from the river when above its natural banks. Probably 5,000 acres are thus treated. Several creeks flow into the county from the Coast Range during part of the year, on the heads of which storage reservoirs could be constructed. Water can be had by digging at depths from 12 to 20 feet along the river, and from 20 to 80 feet along the plains, and in the foothills. The cheapest irrigation is from the river as

above described, costing about 10 cents per acre; by pumps the cost is from \$1.50 to \$5.00 per acre. In this county are several healing springs, which are also used more or less as summer resorts. Blanks' Sulphur Springs, 27 miles southwest from Williams; temperature of water, 108 degrees, and about 1,500 feet elevation; Wilbur Hot Sulphur Springs, one mile from Blank's Springs, temperature, 140 degrees, used locally for medicinal purposes; both these springs highly recommended for rheumatism, catarrh, etc.; Frost's Springs in the northwestern part of the county, 35 miles from Sites; excellent for stomach troubles; elevation, 1,700 feet; Cook's Springs, 20 miles from Sites in Indian Valley, middle-western part of county, 1,500 feet elevation. The water is charged with sulphur, carbonic acid gas, carbonates of soda, magnesia, iron and calcium and has a temperature of 60 to 70 degrees. 100,000 gallons of this water are shipped away annually to all parts of the world. It is bottled at the spring.

In the county, there are about 2,000 acres reported suitable for fruit or any other crop, purchasable in small tracts at \$30 to \$50 per acre, improved. At Colusa is a large roller flour mill; one small saw mill in western part of county. The east slope of the Coast Range does not contain much commercial timber, though it is heavily forested. Large and valuable stone quarries are in the foothills, from which all parts of the State draw. The new ferry depot and the band stand in Golden Gate Park, San Francisco, are built from this stone, taken from the quarries of the Colusa Sandstone Company, and are both monuments of architectural beauty. The principal mineral product (other than stone) is quicksilver. Strong indications exist of petroleum in the southwestern portion of the county, and two oil wells at this time being sunk.

Wages do not differ much throughout the valley. The rates given for this county are not far from the wages paid elsewhere, and may be given here once for all: Farm hands, \$25 to \$30 per month, in harvest time, \$1.50 to \$4 per day; orchard hands, \$25 to \$30 per month; per day, \$1.25; all the above with board, or



YOLO COUNTY.—1. Fruit Packing. 2. Large almond trees in March. 3. Reservoir and pumping plant sub-irrigation used on orchard and vineyard. 4. Main street, looking west, Woodland, Cal. 5. Old-style power almond huller, Davisville. 6. Sled and sheet combined for gathering almonds, Davisville. 7. Scene on Cache Creek, near Esparto, Yolo County, Cal.

\$1.75 in orchards without board. Picking and canning fruits for drying are paid for by the box, and the operators, generally women and children, for cutting, earning from \$1.00 to \$2.00 per day. Mechanics get \$2.50 to \$4.00; masons, \$4.00 to \$5.00; plasterers, \$4.00 to \$5.00; blacksmiths, \$2.00 to \$3.50; printers, union wages; machinists and engineers, \$3.50 to \$5.00; stone cutters, \$4.50 to \$5.00 (union); general laborers, \$1.50 to \$2.00; all above board themselves. Highest temperature, at Colusa, 105 degrees; lowest, 21 degrees; average number clear days, 242; fair days, 74; cloudy, 49.2; rainfall, lowest, 10.5 inches; highest, 33.8; average, 19.67. inches.

One of the peculiarities of the foothill region of this and Glen County, next north, are parallel valleys formed by streams coursing north and south, but shut off from the main valley by ranges of rolling hills. Examples: Bear Creek has its source in the western portion of the valley, flows south, and empties into Cache Creek in Yolo County. Along its course is Bear Valley, ten miles long and nearly two miles wide, elevation 1500 feet. Here is room for many attractive homes; the soil is very productive. Indian Valley, next in importance, lies along Indian Creek, which rises in the southern end of the county, runs north and empties into Stony Creek in Glenn County. Fine crops of all kinds of grain and fruits are raised in this valley. In this valley are Cook's Springs. Antelope Valley lies east of Indian Valley, and courses north and south, and terminates near Sites. The land will produce anything that grows in California; a valuable salt lake or deposit was discovered here by General Bidwell in 1843. These valleys lie west of the main body of valley land, and cannot be seen from the railroad, as they are shut out by intervening parallel hills.

The oil industry in this county, though it is as yet only partially developed, seems to be a very promising one. Paraffine is the base of the oil product of Colusa, and, as the fields, so far as they have been discovered, are only twenty miles from river transportation, and half that distance from the railroad, they may be said to be right in the market. Oil

lands so favorably situated are exceptionally valuable.

Glenn County was taken from the north side of Colusa County, a few years since, and its county-seat established at Willows, a busy town of 1,480 inhabitants. Colusa lost 1,248 square miles by Glenn's secession. Other towns in the county besides Willows are: Orland, 530, and Germantown on the railroad north of Willows; Elk Creek, 300, on Stony Creek; Butte City, 160, on the Sacramento River; Fruto, on a branch railroad west of Willows. The county has an area of 1,248 square miles, and a population of 5,510. I am indebted to Mr. Frank S. Reager, superintendent of schools at Willows for a report which I copy as giving a succinct statement of general facts relating to the county:

"The western portion of Glenn County is in the high mountains, the summit being the boundary; next to these comes about fifteen miles of foothills thickly set with little valleys of wonderful fertility; then comes the valley proper, which is about twenty miles wide from hills to river. Glenn County has about 45,000 acres of very rich land on the east side of the river in the neighborhood of Butte City. The valley land is level, except for the general slope to the southeast. The elevation of these valley "plains" is about 260 feet on the northern boundary, and about 115 on the southern, 28½ miles farther south.

About 500,000 acres of agricultural land, 175,000 acres of grazing, and 124,000 acres of forest land. Wheat, 400,000 acres; barley, 100,000 acres; alfalfa, 400 acres; about 100 acres are devoted to market gardening. 700 acres are devoted to deciduous fruit trees, about half to prunes, one-fourth to peaches, and balance to apricots, pears, and almonds. Oranges, lemons, and olives are to be found in door-yards in every part of the county. About 100 acres in orchard have been set to these trees about Orland. Table grapes, 50 acres.

Live Stock—50,000 sheep; 7,000 cattle; 3,000 horses; 3,500 mules, and 10,000 hogs.

Conditions for dairying are very favorable, but there are not enough cows milked to supply the local demand. There is a creamery at Willows, but it has never operated, as it was impossible to



SOLANO COUNTY.—1. Vacaville from College Park. 2. Old peach and fig trees; peach tree thirty-one years old. 3. Scene in Vaca Valley. 4. Orchard scene, Vaca Valley
5. Property of J. M. Bassford. 6. Pear tree at Lagunita, 37 years old; 600 pounds this year.

get the milk. (What a commentary! 7,000 cattle in this rich county, and the farmer buying his butter elsewhere!—N. P. C.). About 3,000 chickens are kept on the farms. About 40 tons of turkeys are annually shipped, principally from Orland and Fruto. No bees are kept except a few stands at various farms. Opportunities are splendid in this line.

During the summer of 1900 about 600 acres were irrigated by ditches from Stony Creek, about 100 acres by pumping from Sacramento River, and about 40 acres by pumping from wells. About one-third of the deciduous fruit orchards are irrigated, and all the orange and lemon. All the lands of the county are excellent for irrigation. Stony Creek is the only stream from the mountains flowing through the county to the river. In the late fall it has furnished but little water to the irrigators on the plains, although those in the foothill valleys along its course have had water enough, as has everybody in the spring and early summer. However, a great deal of work is now being done on the lower ditches, and we expect better results hereafter. Few streams anywhere offer better facilities for the storage of water than this one does. The Geological Survey has just completed its investigations along Stony Creek, and reports many excellent reservoir sites, three of which were carefully measured with the following results: Briscoe reservoir, with a capacity of 14,630 acre-feet, can be constructed at a total cost of \$122,000; East Park, capacity 25,000 acre-feet, cost \$165,400; Millsite, capacity 45,750 acre-feet, cost \$698,000. This cost includes a liberal estimate for land damages.

There is an inexhaustible supply of water underground, at a depth of from twelve to thirty feet in all parts of the valley lands. At Orland, one well in which the water stands at 20 feet, furnishes 18,000 gallons per hour throughout the irrigating season. There are several other wells there that furnish smaller pumps. The water is raised by wind-mill, horse-power, and gasoline engines. By wind-mill is about as cheap as buying from the ditch, but the small element of uncertainty has caused several more expensive plants to be installed.

By gasoline the cost is about double that of buying from the ditch company, which charges \$2.50 per acre for the season.

The mountains on the west abound with delightful camping grounds, and are filled with summer visitors. Alder Springs is the only one that is fitted for the accommodation of guests without

tents and camping outfits. Many of the Glenn County people prefer to cross the summit into Mendocino and Lake counties. Tuscan Springs, Bartlett Springs, Cook's Springs, Wilber Springs, and Richardson's Springs, while not in the county, are in easy reach of its inhabitants, and are very popular with them. The Sacramento River on the east furnishes excellent fishing, and good sport shooting ducks and geese. The mountains on the west are lined with deer, and the more ambitious hunter can easily find bear and panther. Foxes and coyotes furnish some exciting chases, as many stockmen in the western part of the county keep valuable kennels to combat these enemies of their herds.

About 6,000 acres, suitable for deciduous fruits, citrus fruits, or alfalfa, are now offered in tracts of from five to forty acres. About fifty thousand acres of the choicest land are offered in tracts of 160 acres or more. The best of it will grow anything. The small tracts are held at \$35 to \$65. The larger at from \$20 to \$40 per acre, unimproved. (By unimproved land is meant land under cultivation but without buildings.—N. P. C.)

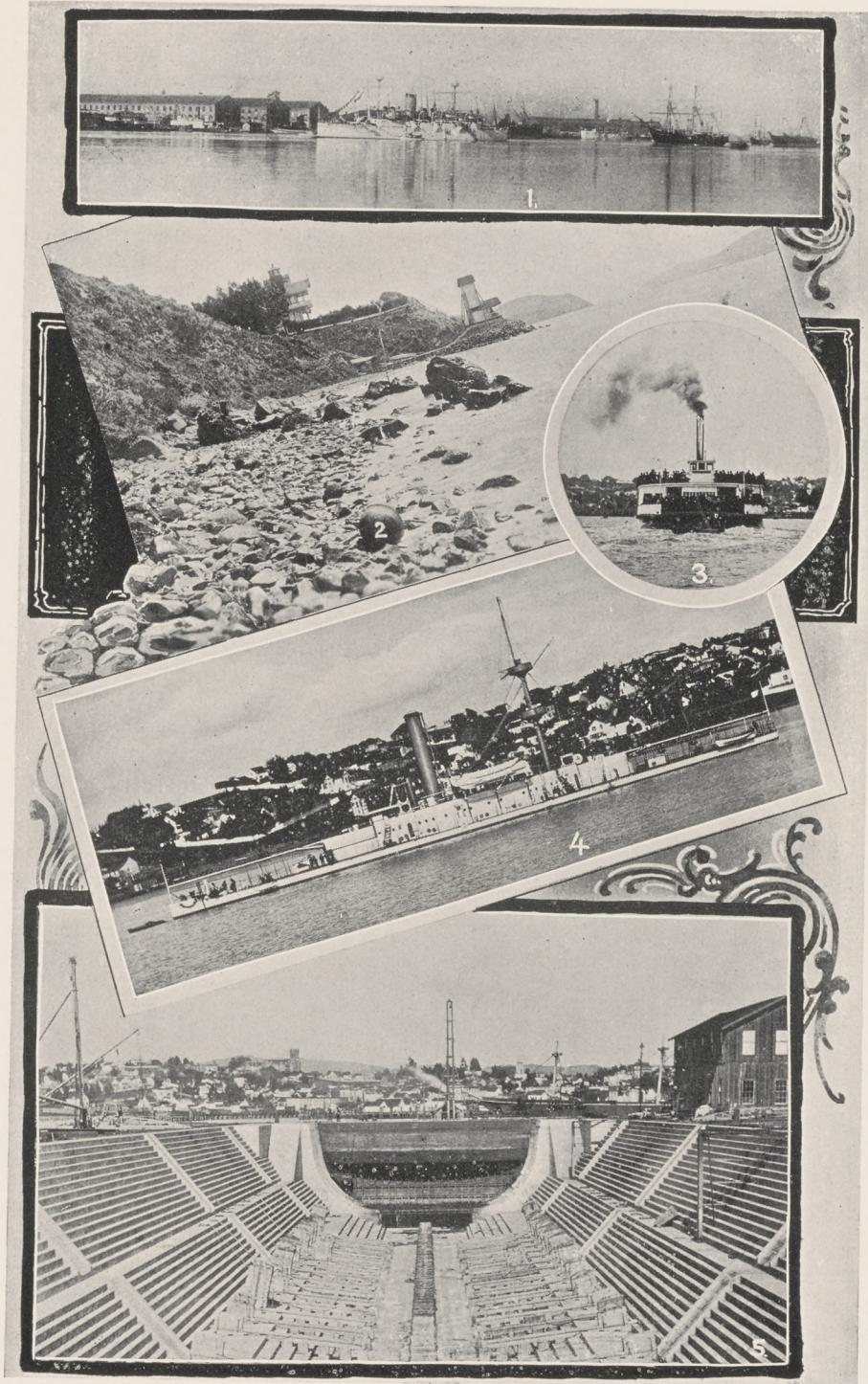
One small saw-mill in the western mountains is in operation. It supplies part of the local demand. There are many excellent opportunities to install electrical plants operated by the waters of Stony Creek.

Farming and stock-raising are the principal industries. Fruit-growing, etc., is as yet in its infancy.

Rainfall in a period of years: Lowest annual, 7.16 for season from September 1, 1897, to September 1, 1898; Highest annual, 25.98 for season from September 1, 1892 to September 1, 1893; Average annual, 17.05. The Weather Bureau considers 16.60 inches normal for Orland. For 1899 the rainfall was 22.41 inches.

Copper and silver have been discovered in refractory ores in quantities too small to pay for working. Coal has been found in vein, too narrow to work. Great quantities of chrome exist and have been mined to some extent, but the cost of transporting to railroad caused operations to cease. Splendid indications exist for oil. The Glenn Co. Oil and Coal Co., The Great Northern Oil Co., the Briscoe Oil and Mineral Co., The Stony Creek Oil Co., are some of the companies preparing to develop these fields. The Glenn County Oil and Coal Co. has a well down 100 feet at present, and is rapidly pushing the work. The Great Northern has its well down 185 feet, and claims to have splendid indications."

I received later the following letter, which I deem of sufficient importance to reproduce it here:



SOLANO COUNTY.—1. Special service squadron, 1892, at Mare Island. 2. Mare Island Light House. 3. Ferry boat "Vallejo"; workingmen returning from Mare Island. 4. Monadnock—first iron warship built (at Vallejo) in California. 5. Mare Island Dry Dock. In use for fifteen years without expenditure of \$1.00 for repairs.

"In submitting the answers to questions I find I overlooked one industry that is fast coming to the front in western Glenn County (and southwestern Tehama as well); that is, the goat business. I copy the following letter that has just reached me from that section:

"Less than 15 years ago the Angora goat was a rarity in Glenn County. Now between the North Fork of Stony Creek and the South Fork of Elder Creek, there are more than 15,000. The portion of the country devoted to their production is immediately along the base of the Coast Range, or of foothills, a country that is unfit for anything else but wild animals.

"The Angora is by nature fitted to climb over rocks, and in brush and rough mountainous localities to procure food, where other domestic animals would not succeed in even living.

"The long silky mohair is valuable for various purposes, and is coming into use more and more each year.

"Angora mutton or venison is far superior to the Mexican, or old American goat, and by many is considered better than sheep mutton. It has sold in the markets for the past two years at about the same price as sheep.

"It is the practice of Angora owners to keep them on the foothills for about eight months—from October to June—then move them to the summit of the mountains for about four months, during the hot season. By so doing the herds have green growing food the year through, and the cool climate of the higher altitudes tends to increase the length and fineness of the mohair. This industry is a growing one, and as the Angoras are located where the land without them would be a total waste, it is greatly to the advantage of the county. There is room for many more as soon as they can be procured. The demand for stock goats is greater than the supply at present.

CONKLIN BROTHERS, Pioneers of the Angora business in Glenn County."

An enterprising effort is being made to develop the orange industry around Orland, and so far it promises success.

We now approach the converging boundaries of the great Sacramento Valley.

Tehama County. At its base I have described five large counties—Nevada, Placer, Sacramento, Yolo, and Solano—stretching from the Sierra mountain top to the Bay of San Francisco. In the middle it was three counties wide, Yuba, Sutter and Colusa. One county (Tehama) now stretches from

the top of Mt. Lassen and the high altitudes of the Sierras to the summit of the Coast Range. Standing on Lassen, 10,400 feet elevation, which has its name from Peter Lassen, who first opened a trail to California south of this monument to his memory, and thence looking down Deer Creek to what is now the town of Vina, the site of Governor Stanford's great vineyard, one has laid before him a panorama of the entire valley below, as far as the eye can discern anything in the glimmer of the sunlight reflected from the golden fields of grain. South and east lies in full view this stupendous mountain range which protects us from the cold winds that sweep from the north down the desert. Looking north the range broadens, finding its apex at Mt. Shasta, 14,440 feet elevation, and blends with the Siskiyou Mountains, which latter, together with the Sierras, form the connecting link with the noble Coast Range, thus raising a barrier on north, east and west against the Arctic blasts, seven and eight thousand feet high, heavily timbered along its western sides and in the middle, nearly the width of the entire State. Little wonder, when the soft trade winds of the ocean are considered, which find their way into the great valley, that this sheltered region is the "land of sunshine, fruit and flowers." At the base of Lassen's cone, on the southeast side in Plumas County, and on the southwest side in Tehama County, are manifestations of volcanic action on an extensive scale, but little known even to Californians, and of great interest to the scientist.

Geyzers, hot springs, hot mud lakes, immense deposits of decomposed mineral substances, out of which most delicate pigments are made, cover large territory, and form one of the most interesting and instructive objects among all the many wonders of nature in California. But let us descend from these enchanting mountain heights; the home seeker does not want to abide among perpetual snow drifts.

Tehama County has a population of 10,996. Its chief towns are Red Bluff, the county-seat, 2,750 inhabitants; Corning, 1,020. There are several suburban additions to Corning, which would more than



double the old town: the population of the adjacent picturesque and promising Maywood Colony is about 1,800; Tehama, 350; Vina, 235. Area of the county, 3,125 square miles—about 2,000,000 acres.

Agricultural land is given at 700,000 acres; grazing 800,000; timbered or forest 500,000. In wheat, 32,900 acres; oats, 1,900; barley, 20,850; hay, 19,340; corn, 12; vegetable gardens, 230; alfalfa, 1,600; sugar beets 1,000 to be planted this year. These figures were furnished me from the Assessor's books. The acreage of wheat in 1900 was smaller than the average, owing to early and continuous rains in November.

Table grapes, 327 acres; wine grapes, 2,990 acres; raisin grapes, 325 acres.

Fruit trees, bearing and non-bearing, 14,013 acres, of which there are 7,451 acres of peaches, 2,567 acres olives, 1,120 acres prunes; the remaining the usual varieties of deciduous trees. Olive planting is the favorite with the Maywood Colony people near Corning.

Live Stock, as shown by the Assessor's roll: Sheep, 175,771; cattle, all kinds, 12,955; horses, 4,513; mules, 1,561; jacks, 19.

I have not mentioned a fact interesting to investors; to wit, the rate of taxation. In this county it is \$1.60 on the \$100. In some of the counties it is a little more and in some a little less. The rate generally is not high.

The healthfulness of this county is excellent, and the same may be said of the entire valley. The county is well watered, especially on the east side of the Sacramento River. On the west facilities exist for irrigation as I have already pointed out, by taking ditches from upper points on the streams coming from the Coast Range. Irrigation is extensively practiced on the Deer Creek orchards, near Vina, and on the alfalfa fields and vineyards of the Stanford estate, and on the lands of the Cone estate, east of Red Bluff.

Large tracts of land have been subdivided in the vicinity of Corning, where is situated the Maywood and Ritchfield Colonies. Probably 10,000 acres are in the market near Corning, in the hands of various enterprising citizens, and at reasonable prices. Steps are being taken

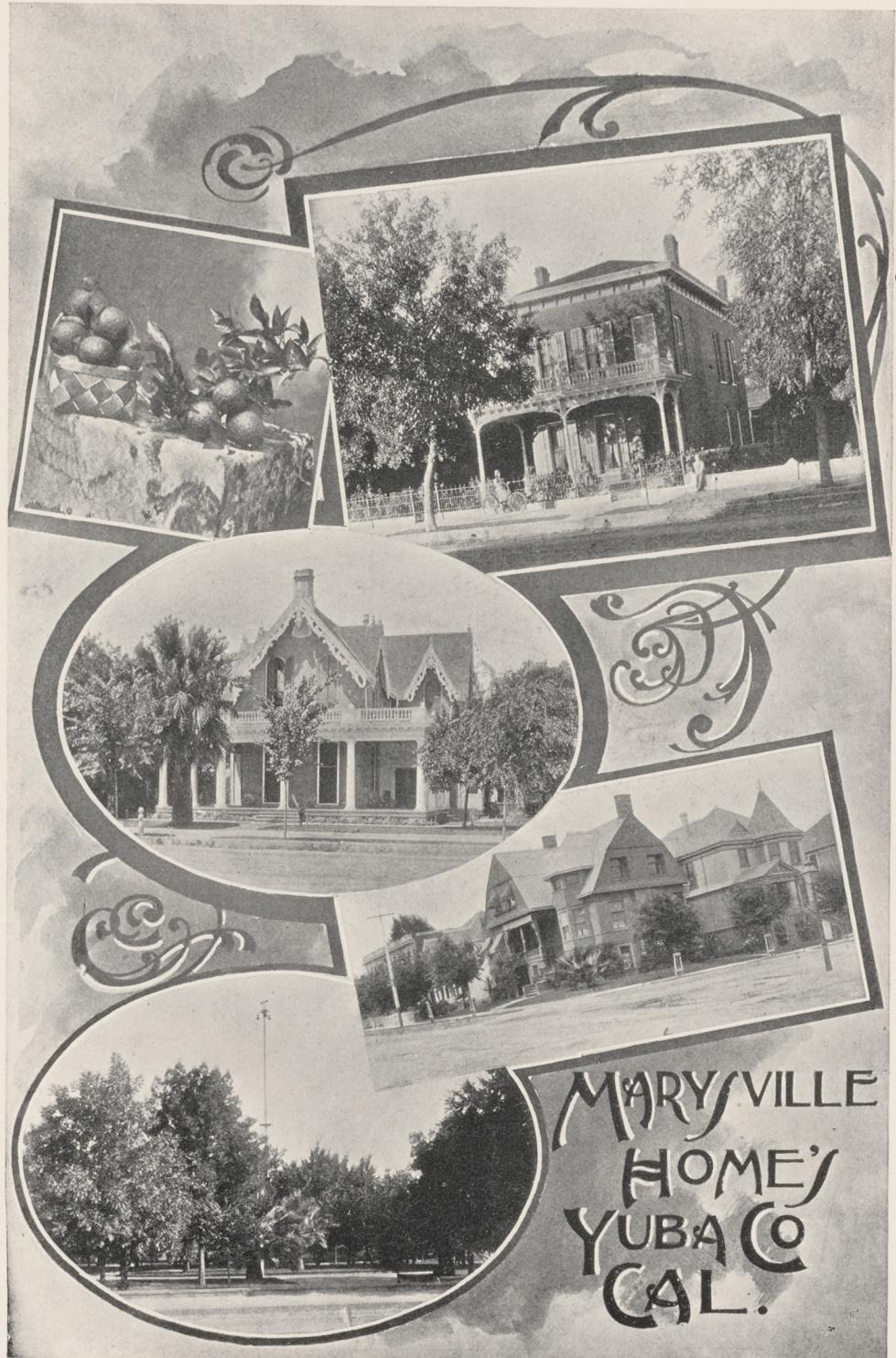
to bring water to these lands, and water is easily attainable by wells. Around Red Bluff are some desirable lands offered in small subdivisions at fair prices. A few orchards in bearing in Berrendos, east side of the river, opposite Red Bluff, on good bottom lands, can be purchased at the price of unimproved land plus the cost of building the orchard. Prices of land in the county, suitable for agriculture and fruit growing, range from \$15 to \$60 per acre.

The surface of Tehama County consists first of a section of the Sacramento Valley, which, south of Red Bluff, expands into a broad and level plain, divided by the Sacramento River. To the west this plain swells into low, level table lands or prairies that farther on lift into broken hills and the steep slope of the Coast Range mountains.

In these mountains numerous streams have their source and flow easterly at irregular intervals from each other through the western half of the county, into the Sacramento River, the principal of which are Cottonwood, Dibble, Reed's, Red Bank, Elder, Thomes, and Stony Creek. On the east of this valley is a lava flow which extends for several miles up the western slope of the Sierra Nevada mountains to what is known as the pine timber belt; above these lava beds the Sierras become more precipitous and are heavily covered with sugar pine, yellow pine and fir timber of excellent merchantable quality. Between the high ridges are numerous fruitful little valleys well watered by the streams which flow westerly into the Sacramento; these streams or creeks are Battle, Digger, Payne's, Antelope, Mill, Deer, and Pine Creeks. Battle, Deer and Mill Creeks furnish almost unlimited opportunities for electrical power plants.

The scenery in this county is not surpassed elsewhere in California; the beautiful, the picturesque, and the grand are so blended as at once to challenge admiration and delight the beholder. One hundred and forty miles to the north Mount Shasta rears its majestic form, is covered with perpetual snow from its summit to the base of the cone.

The dark green of the coniferous forests that cover the lower slopes of the



Sierras, contrasts strongly with their snow-covered tops. The landscapes are charming expressions of rural loveliness; parks of great oaks dotting the hills and scattered over the plains; the long lines of sycamore, cottonwood and elder that fringe the streams; the thousands of acres of orchard and vineyard; the fields of alfalfa with their perpetual verdure; the large flocks of sheep, herds of cattle, and bands of horses here and there to be seen and the vast fields of grain stret-

put is about 20 million feet. There is a large fruit packing house at Red Bluff; a cold storage plant and an ice plant of 15 tons capacity per day. It remains only to notice the healing springs of the county—Colyear's, about 30 miles from Red Bluff, in the Coast Range; Morgan's, in the Sierras, about 50 miles distant. Both of these are large camping resorts. The most notable of the healing waters are found at Tuscan Springs, nine miles east of Red Bluff. Ample

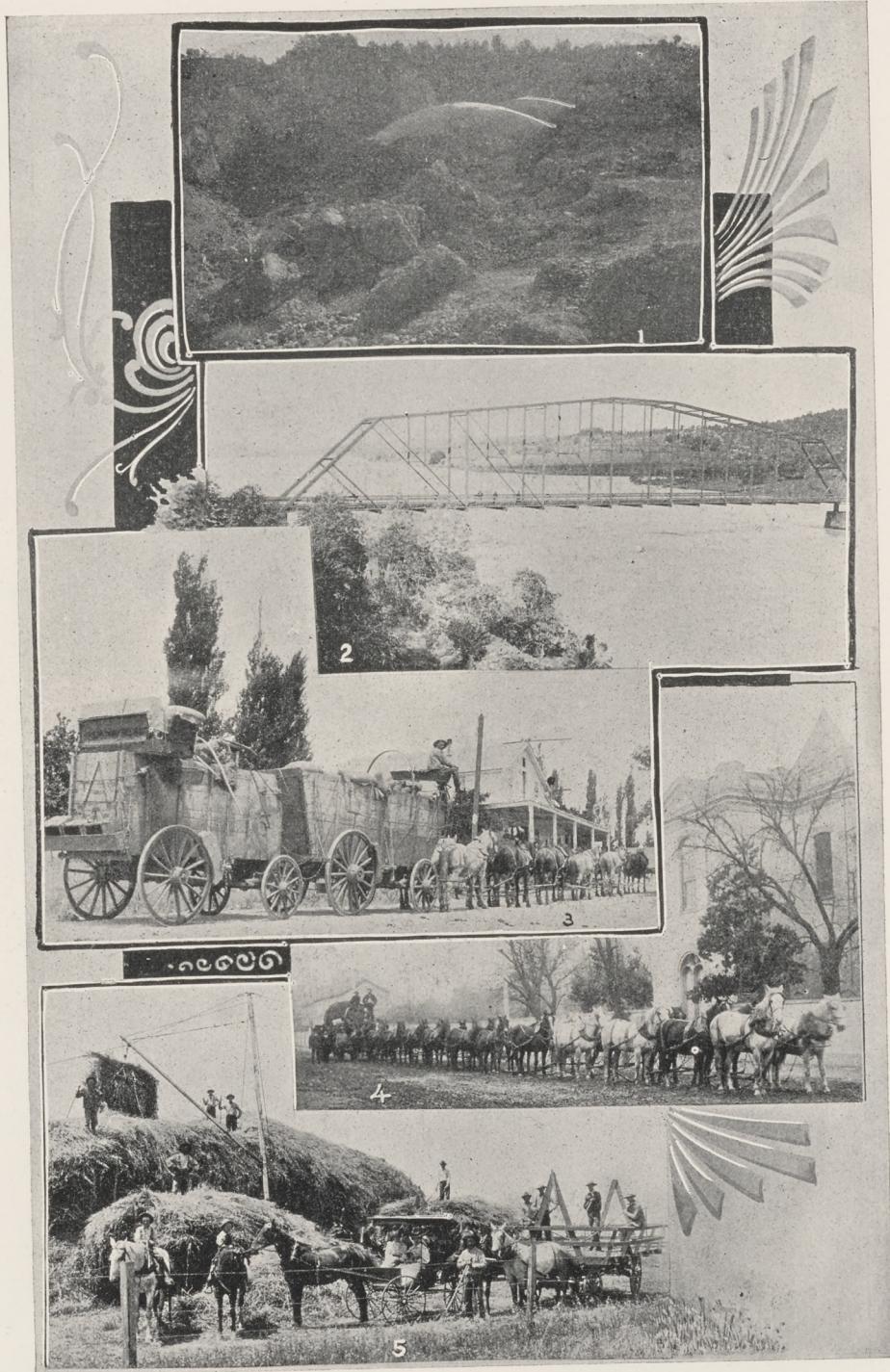


Transportation Blockading the Sacramento River.

ching for miles away, present a picture that few other localities can match.

The principal manufacturing enterprise is that of the Sierra Lumber Company. It has a large sash and door factory at Red Bluff. There is here, also, a well-equipped flour mill. In the mountains the S. L. Co. conducts large lumbering operations, bringing the rough lumber down the mountain sides and across the valley to its plant, on the river, for forty miles in a V flume. Its annual out-

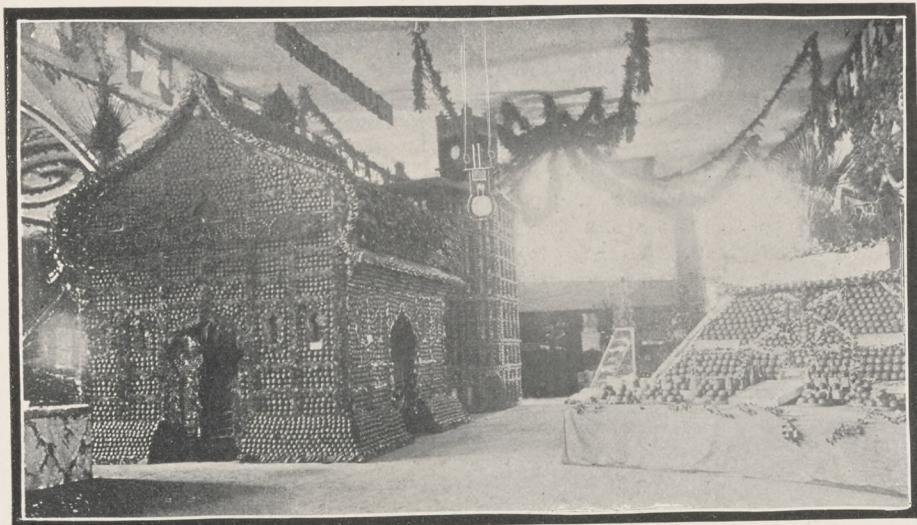
accommodations are here for invalids, and thousands of the lame and halt, and otherwise unfortunate, visit Tuscan in the course of the year, coming from all parts of the State, and from other States. For the special curative properties of these springs, inquiry should be made of the proprietor, Mr. E. B. Walbridge, Tuscan Springs P. O. Strong indications of petroleum are found near the foothills on both sides of the river in this county.



YUBA COUNTY.—1. Hydraulic Mine, Smartsville. 2. Yuba River. 3. Freighting to the mine. 4. Moving machinery from railroad to power house. 5. Stacking hay.



YUBA COUNTY.—Fruit Packing on Feather River Orchard. 2. Olive grove. 3. Hop field. Hop pickers weighing in their pick. 4. Hop yard and drying kiln.



YUBA COUNTY.—House of Oranges, Citrus Fair.

Shasta County. We have now reached the end of our journey, in Shasta County, having traversed an Empire where a million people may find happy homes and profitable employment. Approaching Redding, the

county-seat of Shasta County, we are impressed by the changed appearance of valley and mountain. We are nearer now to these giant ranges, and their carved and jagged surfaces begin to reveal themselves. Looking from the lower end of the valley at Woodland, for example, the mountains on either side are mantled



Almond Orchard in the Sacramento Valley.

with an exquisitely delicate ultramarine blue, ever changing with the degrees and slant of the sun's rays and cloud shadows; at this distant point of view the anatomy of the mountains is not unfolded. Lassen looms up on the east; the Trinity and Yalla Balla Peaks, in the upper Coast Range, on the west, and the dome of noble Mt. Shasta, rises dimly at the northern horizon. All these features become more and more beautiful as we approach the head of the valley. The mountain slopes which were spread before the eye, as upon a canvas, now

ern slope of the Sierras, from foot to summit, stretches out before you, with Lassen towering over all, at this point seemingly more majestic than proud Shasta itself. One now can look into the canyons, that open on the mountain declivities, their profound depths enshrouded in a blue semi-translucent atmosphere that delicately veils their ragged and rock-ribbed sides. It is worth a trip on the west side to Redding (not the east side, for the effects are not there so pronounced) to view the enhanced beauties of the landscape in the stretches of the



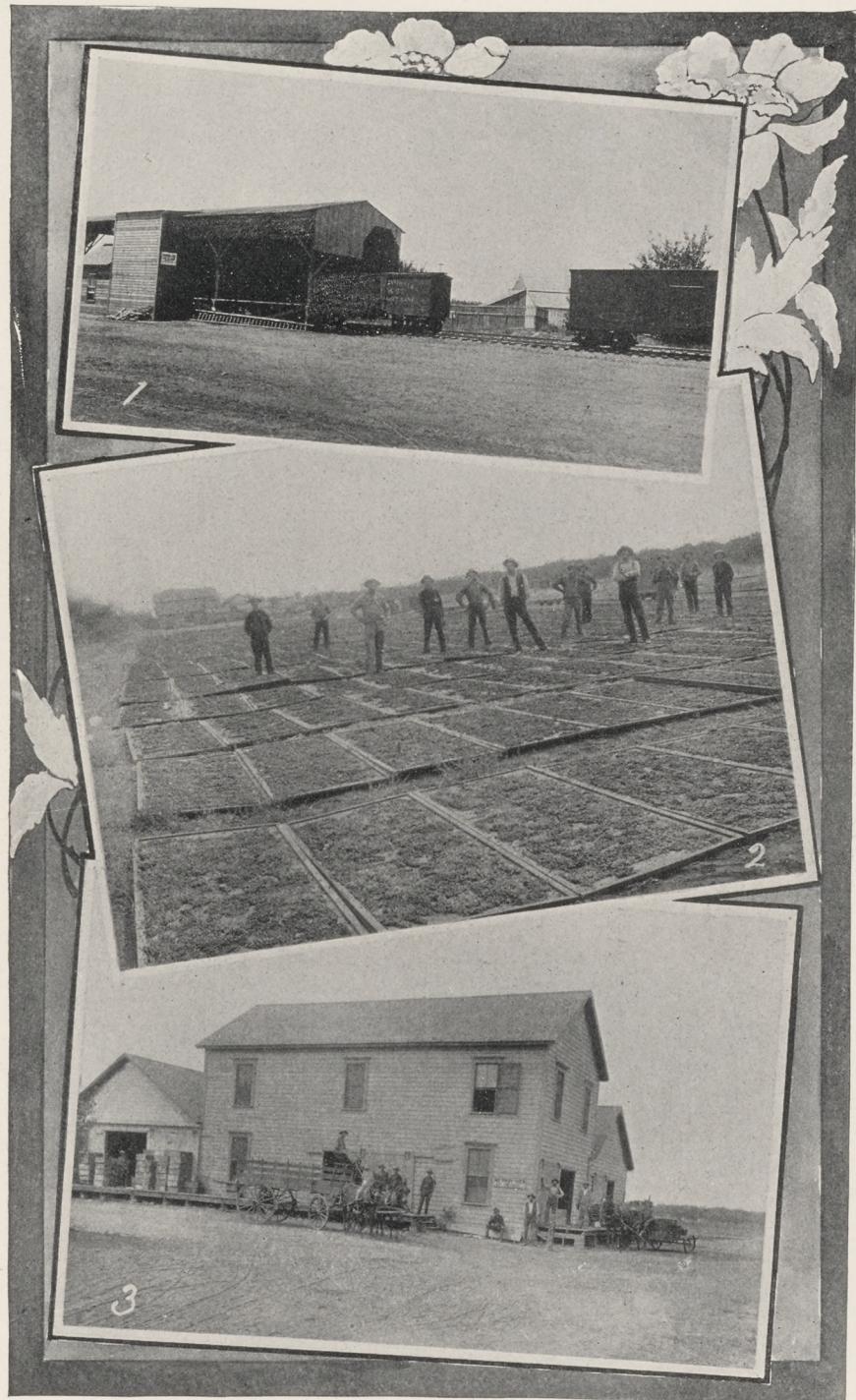
Camping in the Sierras, Northern California.

have life and distinct form and individuality, and one begins to feel their presence. The views from Red Bluff are enchanting, but I have often felt that at Redding we have the culmination of nature's effort in this marvelously beautiful valley. The great white cone of Shasta is visible down to its base, and seems to rise out of a vast forested horizon, the mountain range on which it rests being shut out by intervening rolling, wooded hills.

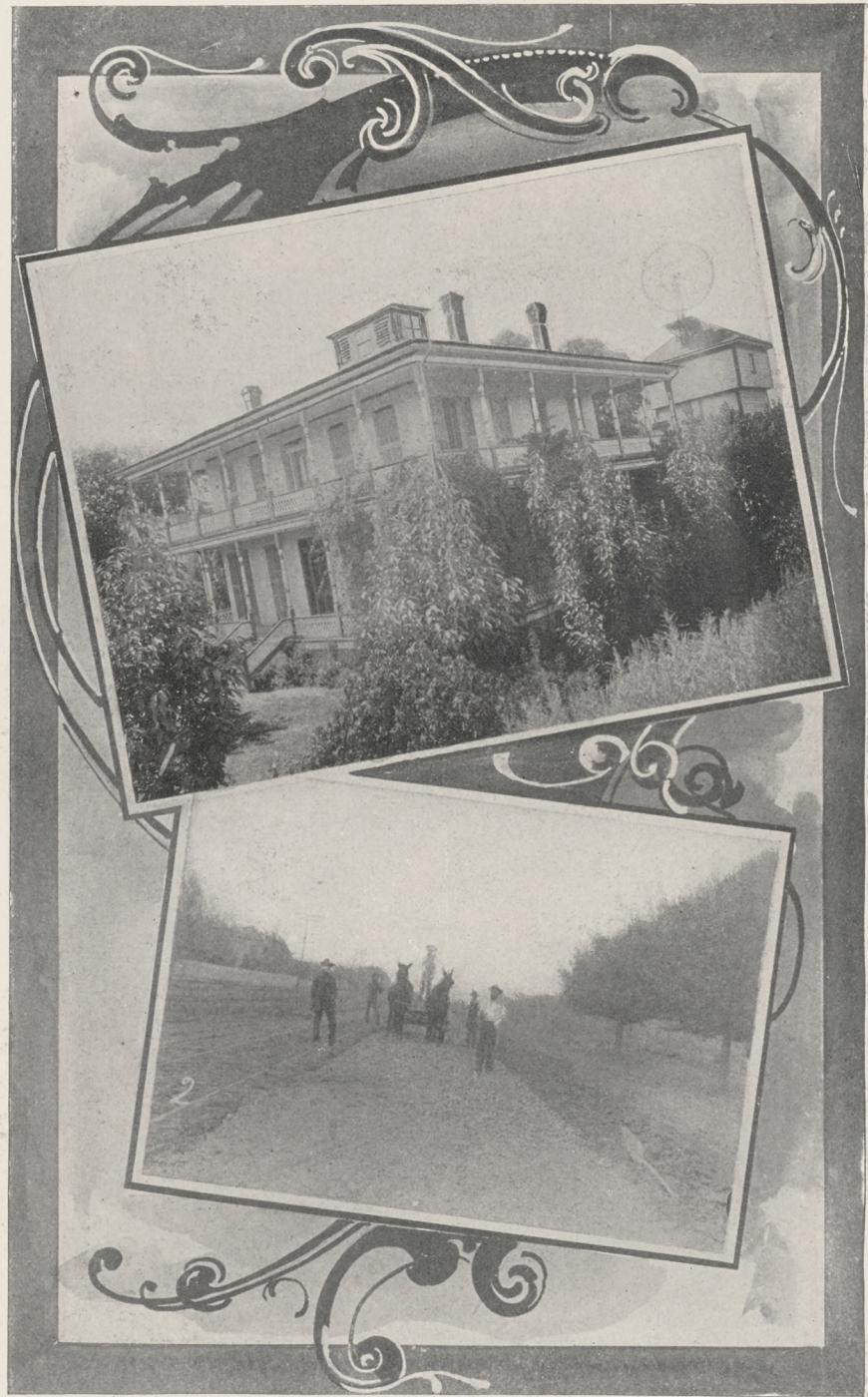
Looking east from the elevated plateau on which the town is situated, the west-

upper portion of the valley.

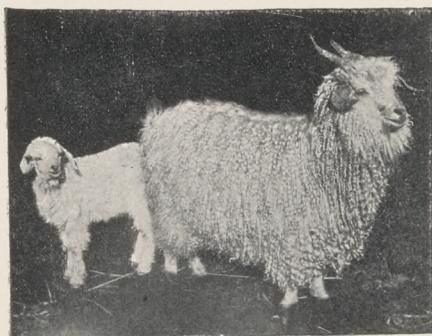
As heretofore indicated, the Coast Range and the Sierras approach at the north of Redding, and surround the county on all sides except that of the south. Enclosed by them is a semi-circle of valley and foothills, and plateaus forming the head of the Sacramento Valley, and containing about 500,000 acres, with an elevation of from 500 to 2,500 feet. The central and southern portions consist of table lands of about 700 feet elevation. Along the Sacramento are some rich river bottom lands. The valley soils



SUTTER COUNTY.—1. Ice house and fruit shed, Yuba City. 2. Raisin drying. 3. A fruit packing house.



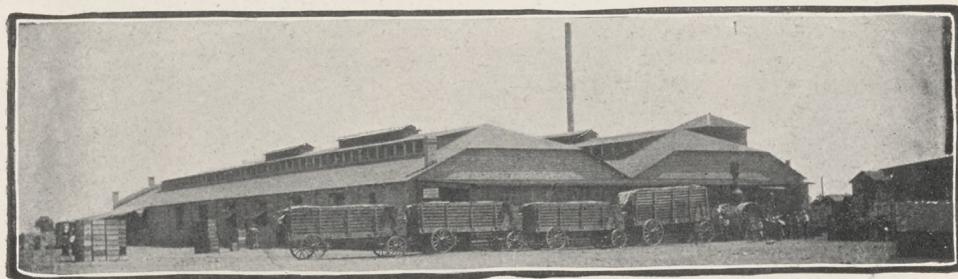
SUTTER COUNTY.—1. A residence in Yu ka City. 2. Making good roads.



Angora goat and kid, Glenn County.

are alluvium, largely intermixed with disintegrated rock and gravel; color, light red or reddish brown. The mesa, or table-lands, are a sandy loam, with a large percentage of clay, while to the south-

Redding, the county-seat, population, 2,940; Keswick (a town recently brought into existence by the Mountain Copper Company), 2,000; Anderson, estimated, 625; Cottonwood, 450; French Gulch, 450; Shasta (formerly the county-seat, and famous in the early mining history of the State), 450. In area, Shasta is the largest county in the group—3,906 square miles. About one-sixth of the land is reported suitable for farming operations, and about three-quarters for grazing, including herein a part of the forested land. Nearly one-half is covered with good timber belts and the entire county is well watered. About 4,000 acres are cultivated in wheat; 10,000 in hay; 500 in alfalfa; 150 in hops. Livestock industry is quite extensive: 20,000 sheep, 20,000 cattle, 4,500 horses and mules. The county is well adapted to stock raising, as ample

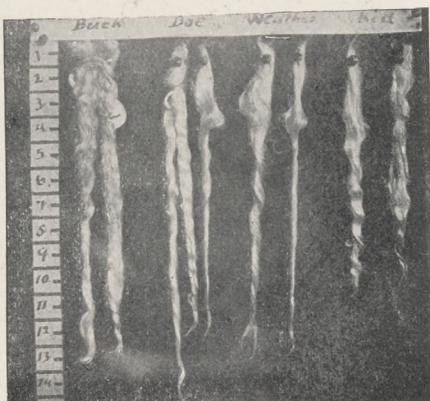


A Butte County Cannery.

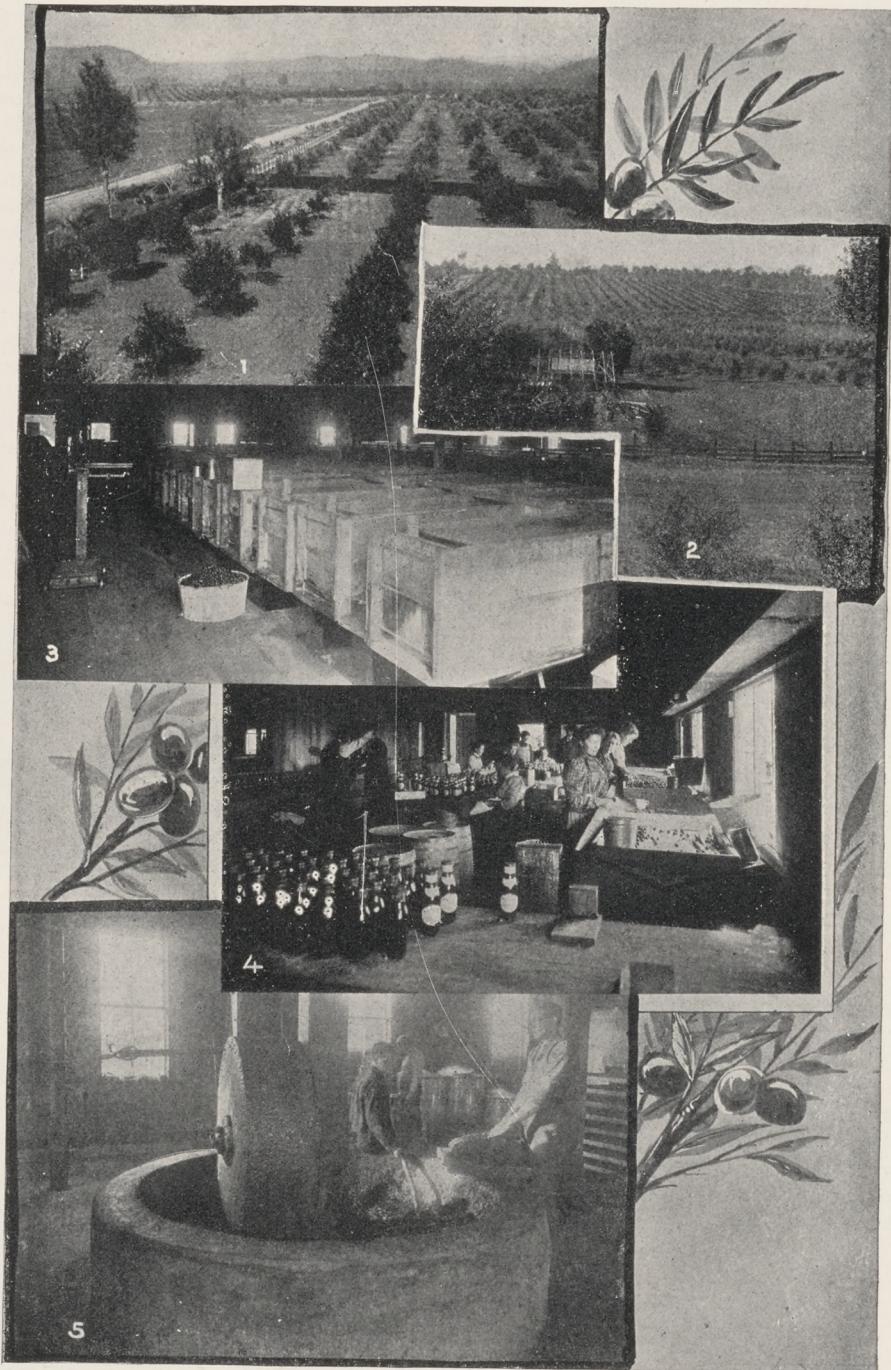
west the soil is adobe. All of these soils are generally rich and productive for grain, grasses, vines and fruits. In Burney Valley, over the crest of the Sierras, is a plateau which extends throughout this range up into Eastern Oregon. This plateau, having an elevation of 3,500 feet, has valleys, reclaimed swamp lands, and rolling highlands. The principal rivers and creeks are Fall River, Pitt, Hat Creek, McCloud River and the Sacramento.

The population of Shasta County is 17,318, showing an increase of 5,135 in ten years—the greatest per cent of increase, I think, in any of the twelve counties, due largely to the awakened interest in the mining industry and somewhat to the greater development of the lumber enterprises. The principal towns are:

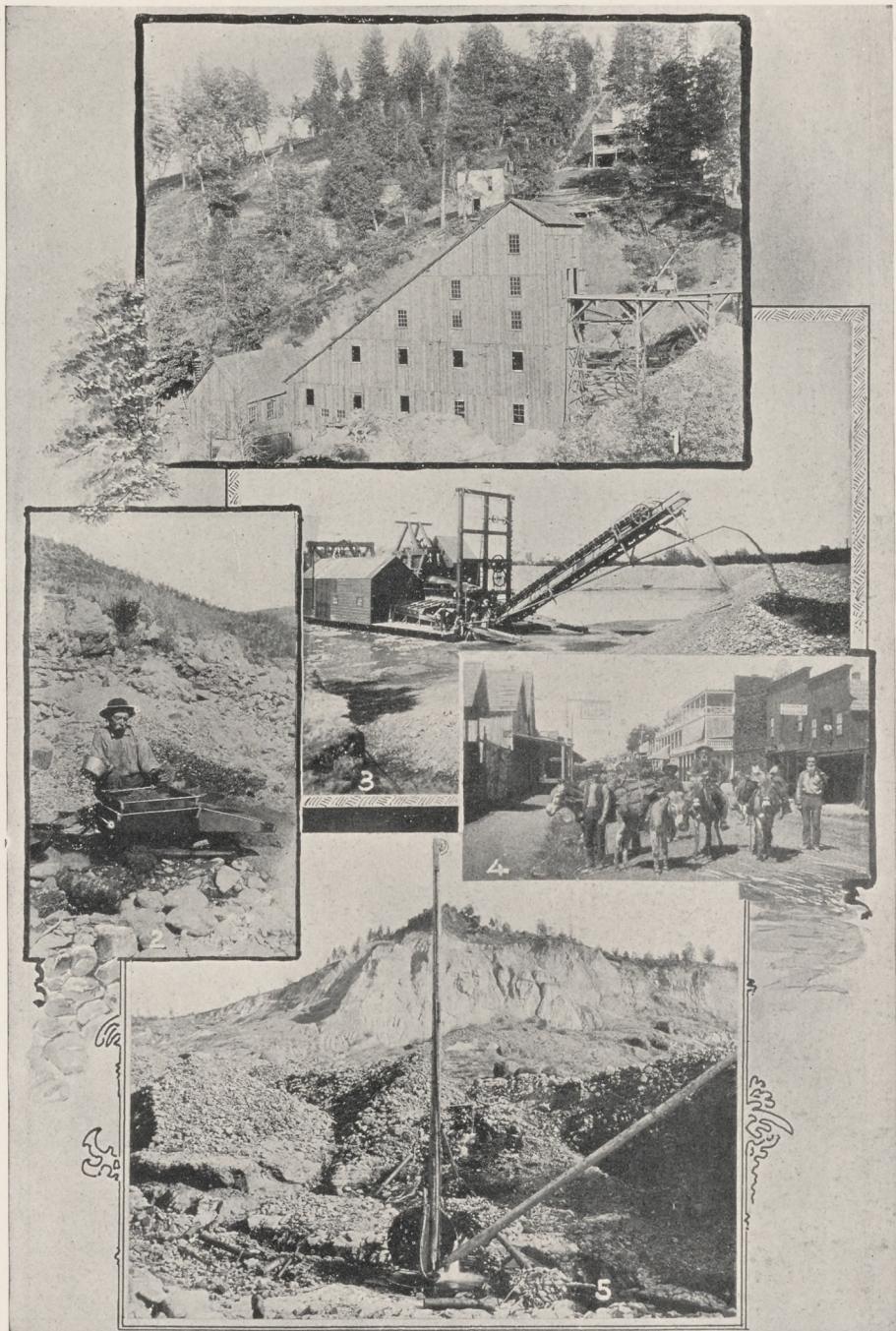
grazing, winter and summer, are afforded. The local markets are excellent, owing to the large population engaged in non-agricultural pursuits. There is a fine field



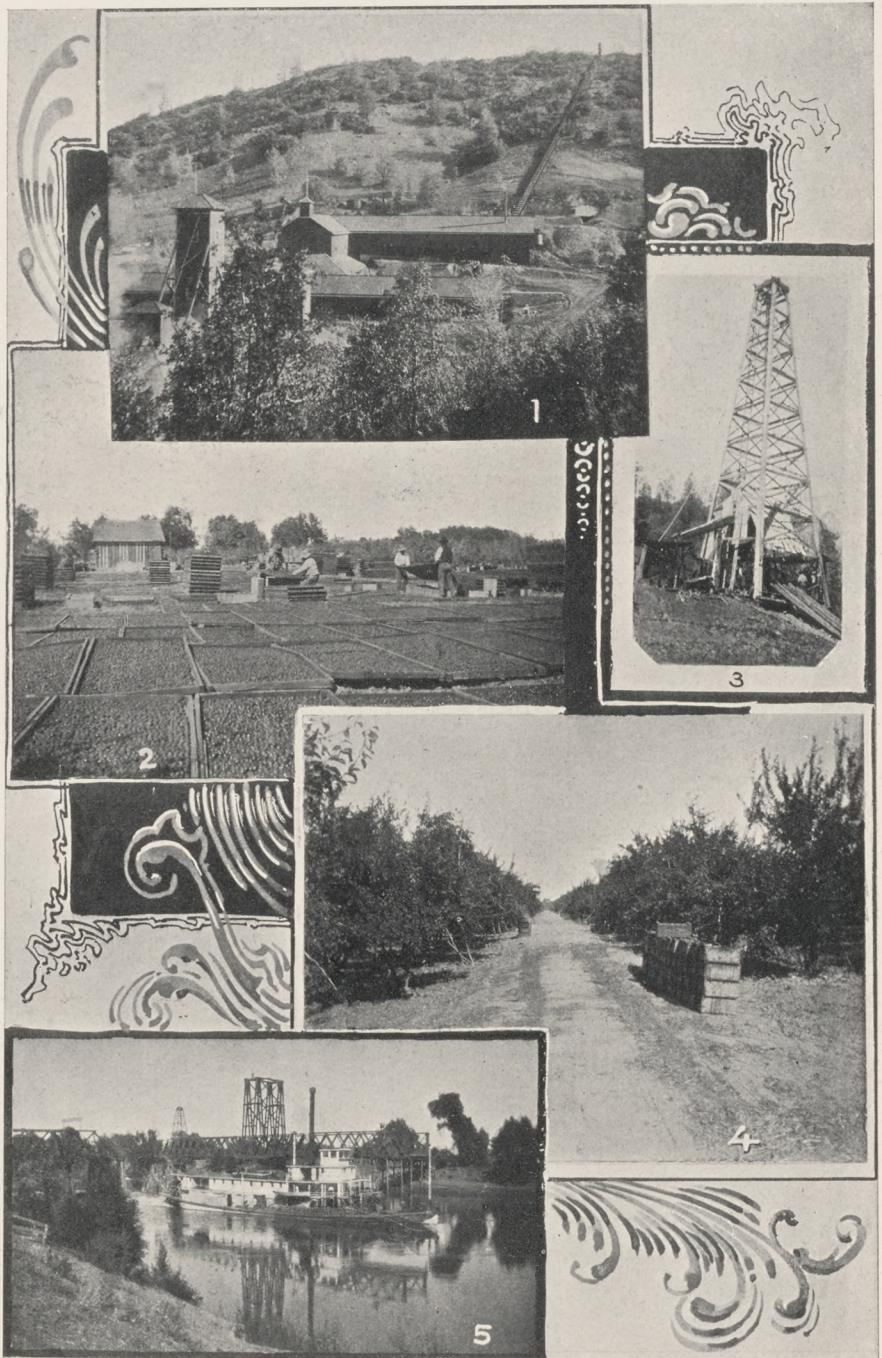
Angora Fleeces, Glenn County.



THE OLIVE INDUSTRY IN BUTTE COUNTY.—1. Olive and orange orchard at Thermalito. 2. Olive and Fig Orchard at Wyandotte. 3. Olive Pickling tanks at Oroville. 4. Bottling pickled olives. 5. Olive oil mill at Oroville.



MINING SCENES IN BUTTE COUNTY.—1. Hoist at Gold Bank Mine. 2. Primitive mining. 3. A gold dredge. 4. Prospecting party. 5. Hydraulic mine.



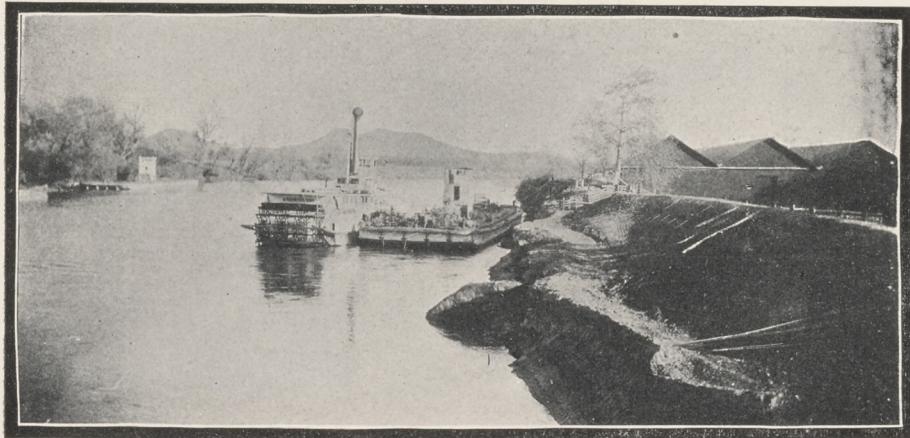
COLUSA COUNTY.—1. Quicksilver mine. 2. Fruit drying yard. 3. First oil derrick in Northern California. 4. Prune orchard. 5. Transportation on Sacramento River.



Ferry Building, San Francisco. Built of Colusa sandstone.

here for bee culture; thousands of acres are covered with manzanita and other flowering shrubs, affording the best of feed for bees. About 5,000 acres are under irrigation. The people are happily situated in the matter of summer resorts, for a half day brings them into lovely mountain retreats. The mineral springs in the vicinity of Castle Crags—giving us the world-renowned Shasta water—are known by the traveling public everywhere, and Shasta Retreat, near by, is

a favorite summer resort for thousands of people. There are reported to be 20,000 acres of available and desirable land for sale in small tracts at prices ranging from \$10 to \$40 per acre. The lumber output is 20,000,000 feet annually. A branch railroad leads from Anderson to Bella Vista, on the east side of the river, the terminus of a lumber flume, and here a box factory is operated. Large electrical power plants are being erected—one on the McCloud River and one on Battle



Grain warehouses and transportation. Sacramento river, Colusa County.

Creek, near Shingletown. The mining industry is quite large—the county standing at the head of the list in the State—copper, gold, silver, iron, limestone, sandstone, kaolin, chromite, and cinnabar, being among the mineral products. Cropings of coal have been found, but none yet developed in commercial quantities. Recent years have brought into great prominence the copper ore deposits in this county, which alone are destined to

The smelters now in operation and under construction will have a wide influence on the mining industry of the State. Fruit grown in this county attains a high flavor, and is rich in saccharine. The orchards are principally near Anderson on the river bottoms, and in Happy Valley (P. O. Olinda) west of Anderson. An important enterprise is projected—no less than building a railroad from Redding to Eureka, Humboldt Bay. Should this

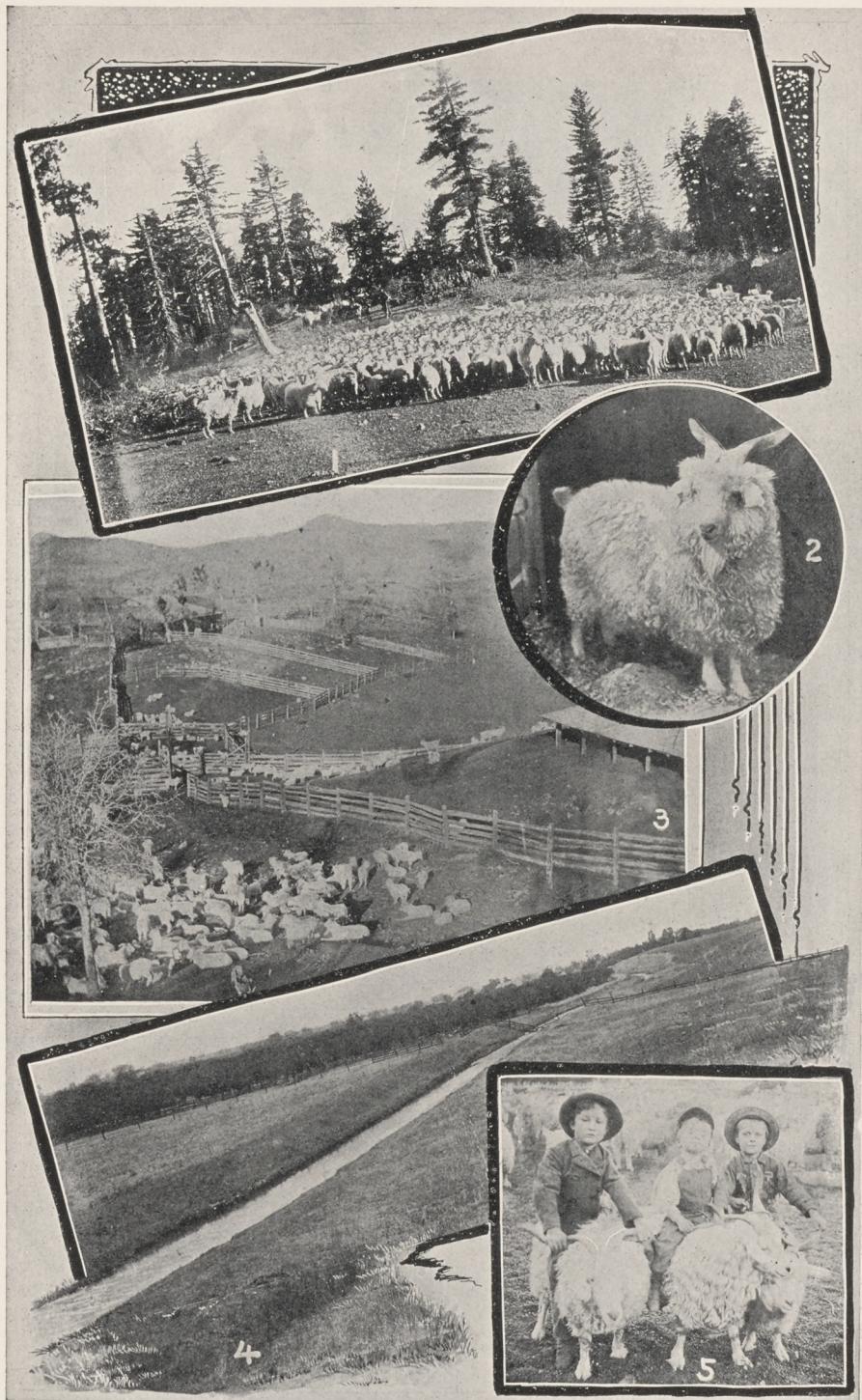


Young Banana Palm at Oroville, Butte County, Cal.

greatly enlarge its importance and wealth. The Mountain Copper Company, near Keswick, on west side of river, is producing not far from five million dollars worth of copper annually. On the east side even greater properties are predicted, and immense sums are being expended in the establishment of plants.

long-talked-of enterprise become accomplished, it will bring into commercial relations two of the leading regions of the State, now almost as completely separated as if in different States widely apart.

There are two United States fisheries in Shasta County. To cap the climax of



GLENN COUNTY.—1. A band of Angora Goats in their summer range at an altitude of 7,000 feet. 2. Angora goat. 3. Goat ranch two miles west of Orland. 4. Irrigation ditch west of Orland. 5. "The Start"—A Glenn County race.



An oak tree in Yolo County.

Shasta's attractions to the business world it is now claimed on high authority that petroleum exists within a few miles of Redding. Two exploration wells are now being driven on the faith of opinion expressed by the experts. In fact, it is now believed that petroleum will be found in all the counties I have described, which will add enormously to their wealth.

As the purpose
of this article is to
**Points of General
Information.** give information
and to anticipate as
far as possible the
inquiries naturally

arising in the mind of an intending settler, I give here a specimen letter recently received, hundreds of which come to the State Board of Trade, and also the answer sent by the secretary and manager, J. A. Filcher.

J. A. Filcher, San Francisco, Cal.—Dear Sir: I recently received a copy of the book entitled "California," published by the State Board of Trade which was sent to me by your body on request for literature regarding your State. Please accept my thanks for the same.

The book I received says that for special information as to localities I can apply to you as secretary and manager of the State Board of Trade. I have long been anxious to go to a warmer climate, but have not been able to do so for the want of means to travel with, and by reason of family ties, but now I see my way clear to realize my hopes in the near future.

I am at a loss to know to what part of

your great State to go to, for I am sure that with a family and small means it would be inconvenient to travel around much after I got there. I would like, therefore, to know what are the attractions and drawbacks to the following sections; viz., the extreme south, the central section and the northern section of California and of Humboldt County. I would like, also, to be informed in regard to the following questions: First: Is there any United States Government land in California subject to homestead law? Second: If not, what are the general prices of land in the sections referred to? Third: What are the products of those places? Fourth: Can good apples be raised in California? If so, where? Fifth: Can a sober, industrious man get land that is improved to work on shares? If so, on what terms? Sixth: Could a poor man with a family, and a stranger, come to your State, and readily get work on farms? Seventh: What are the usual wages for farm hands?

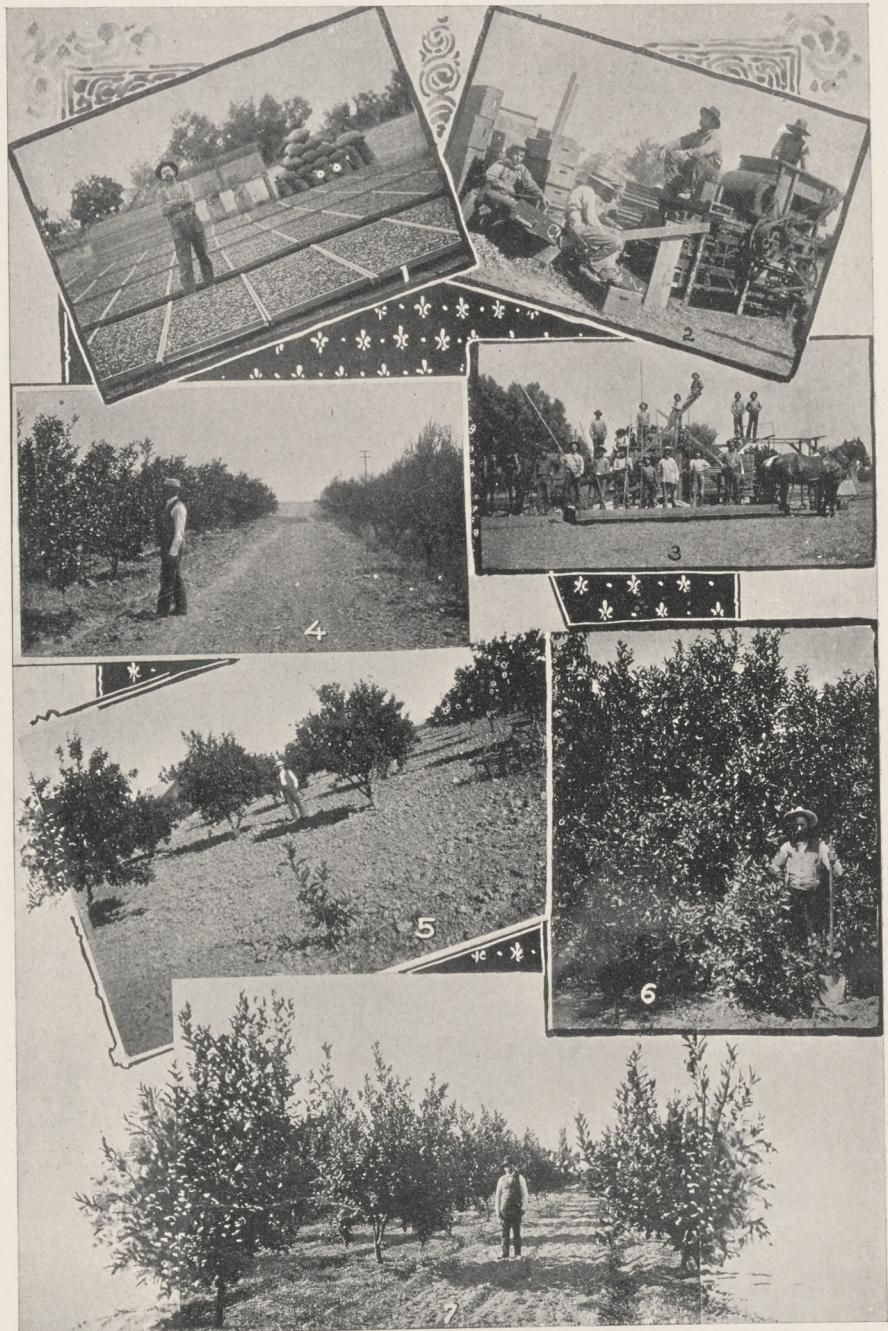
I have no great fault to find with my own State, except that we have about six months winter, during which time we eat up what we have raised during the summer. I always dread the winter when we have to keep busy feeding stock to keep it alive and cutting wood to keep us warm.

Could you put me in communication with some honest and reliable farmer and stock-raiser in Humboldt County, or in some of the other parts of the State here referred to, that would need a hired man, or that would have a farm to let to be worked on shares?

I fear I will tire you with so many questions, but if you put me in the way of the desired information I will be very grateful. I will enclose my picture so you can get some idea how this inquisitive New York farmer looks, and begs to remain,

Yours respectfully,
THOMAS G. STOCKWELL.

Thomas G. Stockwell, Esq., West Windsor, New York—Dear Sir: I have your favor of January 10th, making inquiry regarding California in general, and certain localities in particular. The pamphlet we mail you to-day will answer your inquiries largely in regard to Humboldt County. What you say about your height and weight is interesting but your economic traits, business management and industrial propensities are more likely to lead to success than your physical qualifications. While you say that you do not care to travel around much after you get here, my advice to new comers generally is to inspect the country some before locating. I would, therefore, suggest that in event you immigrate to California that you quarter your family temporarily in some city in the central interior and



ORANGES, OLIVES AND LEMONS AT ORLAND, GLENN COUNTY.—1. Drying almonds. 2. Hulling almonds. 3. The gatherers. 4. Four-year-old orange and olive orchard. 5 Six-year-old orange grove (result of irrigation.) 6. Ten-year-old lemon trees. 7. Four-year-old lemon grove.

spend a few dollars looking up and down the country. I believe that what money such a personal inspection might cost would be more than saved to you in your final investment.

You ask for the attractions and drawbacks of certain sections; viz., the extreme south, the central portion of California, the northern portion and Humboldt County.

The attractions of the South are a mild climate, an enterprising community, and a fairly good market for their staple products. The drawbacks consist of a comparative shortage of water, an item essential to the successful cultivation of diversified products in nearly all parts of California. By a shortage, I do not mean that they have no water; on the other hand, they have a great deal, but the average rainfall is less than in the regions further north.

In the central portions of the State at the same altitude, the winter climate is very similar to southern portions, while the summers in the interior valleys average some warmer. With irrigation all the staple fruits, vegetables, and cereals, including oranges and lemons, in favored localities, can be grown as successfully as in any other portion of the State. The land and water rights are easily obtained and at fair figures in proportion to what can be produced.

In the northern portion at the same altitude, conditions are very similar to the central portion, except that there is a greater amount of rain-fall and a lower average summer temperature, and less irrigation is necessary. The minimum temperature in the Sacramento Valley and San Joaquin Valleys average about the same, land values do not differ materially and the range of products is similar.

For climatic conditions I would refer you to our table of temperatures in the different parts of California, published on page 46 of the pamphlet which we have sent you. The average annual temperature varies very little, indeed, for a distance of five or six hundred miles north and south, or say from Redding on the north to Riverside on the south. A study of the lines of temperature on the official map under the cover of the Government pamphlet sent you by this mail will convince you of this fact. By reason of the Japan current which strikes the coast of California almost at a right angle, temperature is maintained at about the same degree throughout almost the entire length of California, regardless of latitude, while rain-fall varies according to latitude about as your temperature varies as you go from north to south. The farther you go south on the Atlantic Coast the warmer you find the weather; the farther you go south in California the less you find the average amount of rain-

fall; otherwise conditions here at the same altitude are very similar. The soil, of course, varies in different localities, but this variation has more to do with the locality and local physical conditions than latitude.

Humboldt, on the coast, has a very mild summer climate and is not cold in the winter, but is subject to fogs, especially near the sea. This is mainly a lumber county, though stock raising, dairying, agriculture and some horticulture is carried on. Apples do very well in this county. Its principal drawback is its remoteness from markets, as access to the county is only convenient by coast vessels, and products for export either go direct from Humboldt harbor or by re-shipment from San Francisco. There is a prospect at present, however, that Humboldt will soon be connected by railroad with the rest of the world. I send you a publication on Humboldt County which will give you some detailed information.

In regard to the questions which you ask in numerical order, I will say, first: there is no United States Government land in California subject to the homestead law, that under present conditions of altitude and accessibility, will make a desirable home; second, land is reasonable both in price and terms, varying, of course, according to quality and distance from market. Good land in the central sections, with water right, can be had for \$40 an acre and upwards. Third, products of the different sections you referred to include all the cereals, staple fruits, and citrus fruits of the country. Southern California makes more of a specialty of citrus fruits, though it produces good grain and deciduous fruits and good vegetables of all staple varieties. The central and northern valleys make more of a specialty of cereals and deciduous fruits and vegetables, though as far north as Redding citrus fruits are successfully and profitably grown. In some localities in the northern and central region good money is being made out of oranges and lemons. Fourth, apples are raised successfully in nearly all portions of California, though the best apples come from near the coast, or from the mountain counties. From one to three thousand feet altitude, along the entire western slope of the Sierras, seems to be the natural apple belt of the State, including certain sections of San Diego and other southern counties that have a high altitude; fifth, I think a good, sober and industrious man would have little trouble in finding a desirable place to work on shares, as leases of improved places are very common, and it is reasonable to assume that as some expire others will be made. The terms vary according to the nature of the crop and the extent and condition of the place and its productive

capability. If you should not rent easily you would have no difficulty in finding a desirable piece of land which you could buy on very easy terms, on which you could build a comfortable home. Industrious men with small capital have done this in California in thousands of instances, and what one has done, others can do; sixth, I think a good steady man should easily obtain employment; if he proved himself apt in caring for and pushing the interests of his employer, he would have no difficulty in retaining his job. Wages for farm hands very from \$25 and upwards in the winter months to \$35 and upwards in the summer months. Apt and reliable men who develop a faculty for managing others obtain correspondingly better salaries.

I believe I have pretty fully answered your questions. Your letter interests me, and if I can be of further service, feel perfectly free to ask any other questions which you desire to be informed upon. In the meantime I remain,

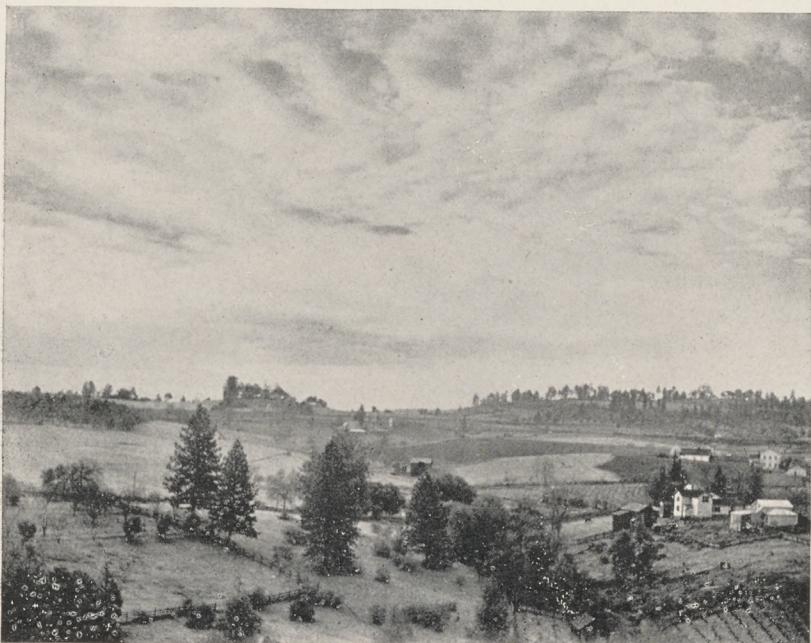
Yours very truly,
J. A. FILCHER,
Secretary and Manager.

In taking leave of the Sacramento Valley, I can recommend all parts of it unhesitatingly to the home-seeker, wherever he may be. One of the great embarrassments he will experience will be to decide where, in this vast section of desirable country, to select his home. I have endeavored to lighten the task

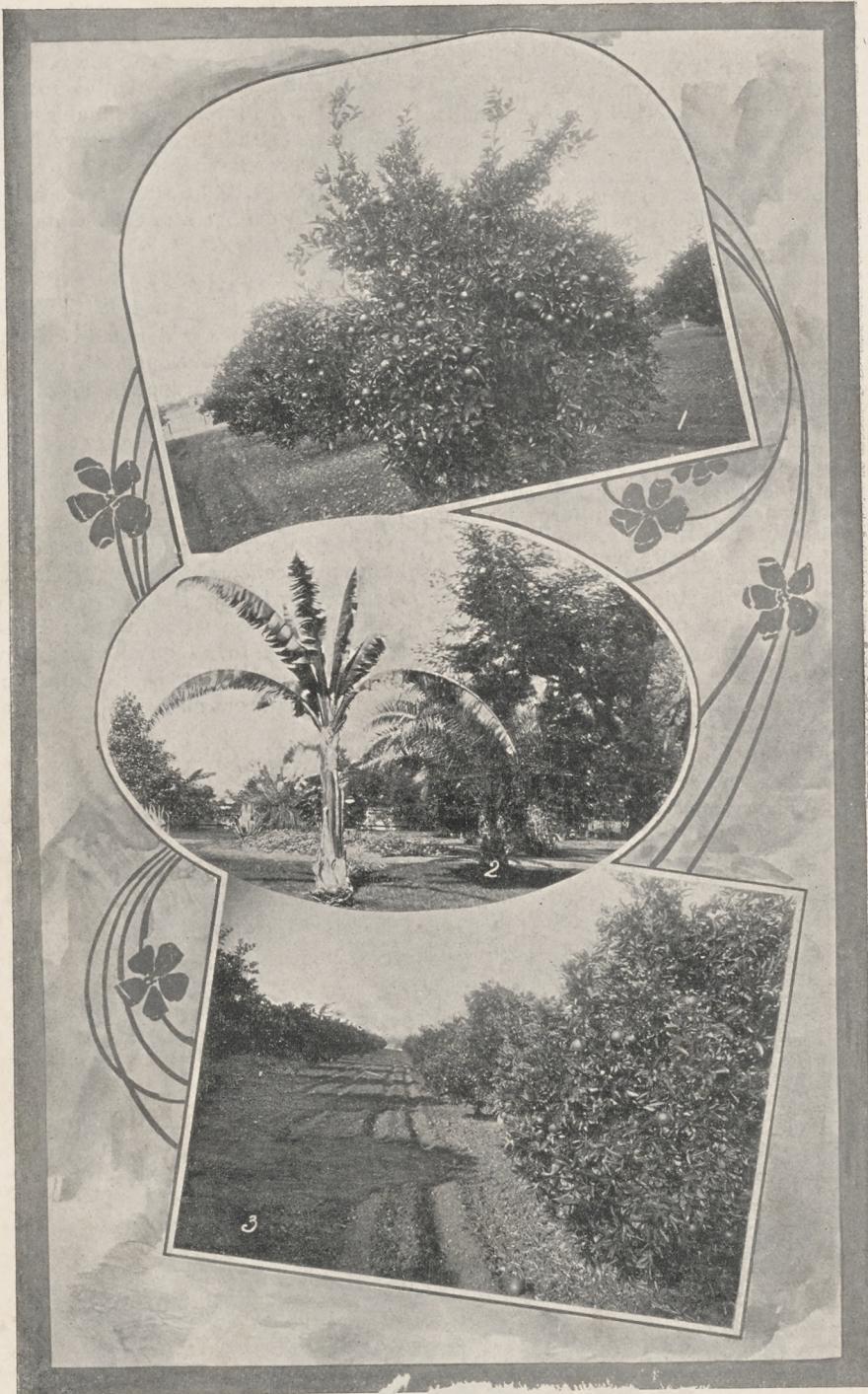
and expense to him of ascertaining where to go by stating facts as to the valley generally, and as to the counties somewhat particularly. Intelligent inquiry will in most cases lead to satisfactory results; and wherever he may determine to make his abiding place, he will find so much to charm and delight him that contentment is sure to follow.

In conclusion, I desire to express my thanks to the gentlemen in the several counties who were designated by the Sacramento Valley Development Association to furnish me with specific information, and upon whose reports the main facts relating to individual counties are stated. As the object of this article is not only to convey reliable information to intending settlers, but also to put them in communication with sources of accurate knowledge concerning the valley it would seem proper to give the names of the officers of the Association, who will cheerfully respond to all questions, and will give the names of persons in each county to whom inquirers may write. They are:

W. S. GREEN, Colusa, President.
F. E. WRIGHT, Colusa, Secretary.
FRANK MILLER, Sacramento, Treasurer



Picturesque Placer County.



OUR SICILY.—PALERMO.

1. Naval orange, five years from the bud. 2 Side view of a home garden. 3 Palermo-orange grove ready for irrigation.

This pamphlet is issued by The Sacramento Valley Development Association, an association composed of the twelve counties of the Sacramento Valley and its water-shed. Its purpose is to harmonize its different interests and to bring to the attention of the world our wonderful resources.

The counties comprising the Association are: Shasta, Tehama, Butte, Yuba, Sutter, Nevada, Placer, Sacramento, Glenn, Colusa, Yolo, and Solano. The officers of the Association are:

GENERAL W. S. GREEN, President, Colusa, Cal.

Vice Presidents:

J. J. CHAMBERS, Redding, Cal., for Shasta County.
HON. C. F. FOSTER, Corning, Cal., for Tehama County.
W. A. BEARD, Oroville, Cal., for Butte County.
COL. E. A. FORBES, Marysville, Cal., for Yuba County.
H. P. STABLER, Yuba City, for Sutter County.
W. F. ENGLEBRIGHT, Nevada City, for Nevada County.
W. B. GESTER, Newcastle, Cal., for Placer County.
J. O. COLEMAN, Sacramento, Cal., for Sacramento County.
F. S. REAGER, Willows, Cal., for Glenn County.
J. W. KAERTH, Colusa, Cal., for Colusa County.
C. W. THOMAS, Woodland, Cal., for Yolo County.
Hon. RALEIGH BARCAR, Vacaville, Cal., for Solano Co.
FRANK MILLER, President National Bank, D. O. Mills,
Treasurer, Sacramento, Cal.

F. E. WRIGHT, COLUSA, CAL., SECRETARY.

Parties interested in our part of California can receive special information by addressing any of the above officers.

W. S. GREEN, President,

F. E. WRIGHT, Secretary.

APR 22 1978

